

CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX
 SQ Sequence 13 AA;

Query Match 90.3%; Score 65; DB 4; Length 13;
 Best Local Similarity 84.6%; Pred. No. 0.00033;
 Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
 |||||:||||
 Db 1 CASELGKSTNTFC 13

RESULT 7
 AAU04537
 ID AAU04537 standard; peptide; 13 AA.

XX AC AAU04537;
 XX DT 26-SEP-2001 (first entry)
 XX DE VEGF based monocyclic peptide 15.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.

XX Synthetic.

XX Key Location/Qualifiers
 FH Disulfide-bond 1..13
 FT /note= "This bond cyclises the peptide"

XX WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.

XX Example 25; Page 47; 102pp; English.

XX The sequence represents a monomeric monocyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGF (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides), and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition

CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX
 SQ Sequence 13 AA;

Query Match 90.3%; Score 65; DB 4; Length 13;
 Best Local Similarity 84.6%; Pred. No. 0.00033;
 Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
 |||||:||||
 Db 1 CASELGKSTNTFC 13

RESULT 8
 AAU04547
 ID AAU04547 standard; peptide; 17 AA.

XX AC AAU04547;

XX DT 26-SEP-2001 (first entry)

XX VEGF based bicyclic dimeric peptide #4.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.

XX Synthetic.

XX Key Location/Qualifiers
 FH Disulfide-bond 1..13
 FT /note= "This bond cyclises the peptide"

XX Disulfide-bond 17
 FT /note= "A disulfide bond forms between residue 17 and
 FT residue 17 of an identical peptide to form a dimeric
 FT peptide"

XX WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.

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PS Example 26; Page 49; 102pp; English.
XX
CC The sequence represents a dimeric bicyclic peptide of the invention,
CC whose 3-dimensional structure is modelled on the expose loop of human
CC VEGF (vascular endothelial growth factor). The invention relates to a
CC method of producing a monomeric monocyclic peptide by a measuring beta-
CC beta carbon separation distances on opposite antiparallel strands of a
CC peptide loop fragment from an exposed loop of a growth factor protein and
CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
CC peptides) and a cyclic peptide with at least one amino acid deleted prior
CC to cyclisation are used to interfere with angiogenesis,
CC neovascularisation or lymphangiogenesis in a mammal with a condition
CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
CC The condition is diabetic retinopathy, psoriasis, arthropathy,
CC hemangioma, vascularised malignant or benign tumour, post-recovery
CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
CC trauma, substance-induced neovascularisation of the liver, excessive
CC hormone-related angiogenic dysfunction, diabetes induced neovascular
CC sequelae, hypertension induced neovascular sequelae, or chronic liver
CC infection. The peptides are also used to modulate vascular permeability
CC in a mammal (the mammal has a condition characterised by fluid
CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
CC or brain. The peptides are used to image blood vessels and lymphatic
CC vasculature. The monomeric and bicyclic peptides are used to interfere
CC with at least one biological activity induced by VEGF, VEGF-C or -D and
CC are also used in combination with an anti-inflammatory agent, to treat a
CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
CC diabetic retinopathy
XX
SQ Sequence 17 AA;
Query Match 90.3%; Score 65; DB 4; Length 17;
Best Local Similarity 84.6%; Pred. No. 0.00044;
Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 1 CASELGKSTNTSFC 13
|||||:|||||
1 CASELGKSTNTSFC 13

RESULT 10
AAU04549
ID AAU04549 standard; peptide; 17 AA.
XX
AC AAU04549;
XX
XX
DT 26-SEP-2001 (first entry)
XX
DE VEGF based bicyclic dimeric peptide #6.
XX
KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Disulfide-bond 1. 13
FT Disulfide-bond 17
FT /note= "This bond cyclises the peptide"
FT /note= "A disulfide bond forms between residue 17 and
FT residue 1 of the sequence appearing as AAU04528, forming
FT a dimeric peptide"
XX
FN WO200152875-A1.
XX
PD 26-JUL-2001.
XX
FF 18-JAN-2001; 2001WO-US001533.
XX
PR 18-JAN-2000; 2000US-0176293P.

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PR 16-MAY-2000; 2000US-0204590P.
XX
PA (LUDW-) LUDWIG INST CANCER RES.
XX
PI Achen MG, Hughes RA, Stacker S, Cendron A;
XX
DR WPI; 2001-442248/47.
XX
XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
XX or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
XX from an exposed loop of a growth factor protein by oxidizing the cysteine
XX residues.
XX
XX Example 26; Page 49; 102pp; English.
XX
CC The sequence represents a dimeric bicyclic peptide of the invention,
CC whose 3-dimensional structure is modelled on the expose loop of human
CC VEGF (vascular endothelial growth factor). The invention relates to a
CC method of producing a monomeric monocyclic peptide by a measuring beta-
CC beta carbon separation distances on opposite antiparallel strands of a
CC peptide loop fragment from an exposed loop of a growth factor protein and
CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
CC peptides) and a cyclic peptide with at least one amino acid deleted prior
CC to cyclisation are used to interfere with angiogenesis,
CC neovascularisation or lymphangiogenesis in a mammal with a condition
CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
CC The condition is diabetic retinopathy, psoriasis, arthropathy,
CC hemangioma, vascularised malignant or benign tumour, post-recovery
CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
CC trauma, substance-induced neovascularisation of the liver, excessive
CC hormone-related angiogenic dysfunction, diabetes induced neovascular
CC sequelae, hypertension induced neovascular sequelae, or chronic liver
CC infection. The peptides are also used to modulate vascular permeability
CC in a mammal (the mammal has a condition characterised by fluid
CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
CC or brain. The peptides are used to image blood vessels and lymphatic
CC vasculature. The monomeric and bicyclic peptides are used to interfere
CC with at least one biological activity induced by VEGF, VEGF-C or -D and
CC are also used in combination with an anti-inflammatory agent, to treat a
CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
CC diabetic retinopathy
XX
SQ Sequence 17 AA;
Query Match 90.3%; Score 65; DB 4; Length 17;
Best Local Similarity 84.6%; Pred. No. 0.00044;
Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 1 CASELGKSTNTSFC 13
|||||:|||||
1 CASELGKSTNTSFC 13

RESULT 10
AAU04549
ID AAU04549 standard; peptide; 17 AA.
XX
AC AAU04549;
XX
XX
DT 26-SEP-2001 (first entry)
XX
DE VEGF based bicyclic dimeric peptide #6.
XX
KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Disulfide-bond 1. 13
FT Disulfide-bond 17
FT /note= "This bond cyclises the peptide"
FT /note= "A disulfide bond forms between residue 17 and
FT residue 1 of the sequence appearing as AAU04528, forming
FT a dimeric peptide"
XX
FN WO200152875-A1.
XX
PD 26-JUL-2001.
XX
FF 18-JAN-2001; 2001WO-US001533.
XX
PR 18-JAN-2000; 2000US-0176293P.

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FT Disulfide-bond 17 /note= "This bond cyclises the peptide"
 FT FT /note= "A disulfide bond forms between residue 17 and
 FT residue 17 of an identical peptide to form a dimeric
 FT peptide"
 XX W0200152875-A1.
 XX XX 26-JUL-2001.
 XX 18-JAN-2001; 2001WO-US001533.
 XX 18-JAN-2000; 2000US-0176293P.
 XX 16-MAY-2000; 2000US-0204590P.
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX Achen MG, Hughes RA, Stacker S, Cendron A;
 XX WPI; 2001-442248/47.
 XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.
 XX Example 26; Page 49; 102pp; English.
 XX The sequence represents a dimeric bicyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGFD (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX SQ Sequence 17 AA;
 Query Match 90.3%; Score 65; DB 4; Length 17;
 Best Local Similarity 84.6%; Pred. No. 0.00044;
 Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CASELGKSTNTFC 13
 |||||:|||||:
 Db 1 CASELGKSTNSFC 13
 RESULT 11
 AAU04536
 ID AAU04536 standard; peptide; 13 AA.
 XX AC AAU04536;
 XX

DT 26-SEP-2001 (first entry)
 XX VEGF based monocyclic peptide 14.
 DE Human; VEGF; vascular endothelial growth factor; angiogenesis;
 XX neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.
 XX Synthetic.
 OS Key Location/Qualifiers
 XX Disulfide-bond 1..13
 FT /note= "This bond cyclises the peptide"
 XX W0200152875-A1.
 XX 26-JUL-2001.
 XX 18-JAN-2001; 2001WO-US001533.
 XX 18-JAN-2000; 2000US-0176293P.
 XX 16-MAY-2000; 2000US-0204590P.
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX Achen MG, Hughes RA, Stacker S, Cendron A;
 XX WPI; 2001-442248/47.
 XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.
 XX Example 25; Page 47; 102pp; English.
 XX The sequence represents a monomeric monocyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGFD (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX SQ Sequence 13 AA;
 Query Match 84.7%; Score 61; DB 4; Length 13;
 Best Local Similarity 76.9%; Pred. No. 0.0016;
 Matches 10; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CASELGKSTNTFC 13
 |||||:|||||:
 XX

Db 1 CASDVGKSTNTWC 13

RESULT 12
AAU04548

ID AAU04548 standard; peptide; 17 AA.

XX AAU04548;

XX 26-SEP-2001 (first entry)

XX VEGF based bicyclic dimeric peptide #5.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.

XX Synthetic.

XX Key Location/Qualifiers

FT Disulfide-bond 1..13 /note= "This bond cyclises the peptide"

FT Disulfide-bond 17 /note= "A disulfide bond forms between residue 17 and
FT residue 17 of an identical peptide to form a dimeric
FT peptide"

XX WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
PT from an exposed loop of a growth factor protein by oxidizing the cysteine
PT residues.

XX Example 26; Page 49; 102pp; English.

XX The sequence represents a dimeric bicyclic peptide of the invention,
CC whose 3-dimensional structure is modelled on the exposed loop of human
CC VEGF (vascular endothelial growth factor). The invention relates to a
CC method of producing a monomeric monocyclic peptide by a measuring beta-
CC beta carbon separation distances on opposite antiparallel strands of a
CC peptide loop fragment from an exposed loop of a growth factor protein and
CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
CC peptides) and a cyclic peptide with at least one amino acid deleted prior
CC to cyclisation are used to interfere with angiogenesis,
CC neovascularisation or lymphangiogenesis in a mammal with a condition
CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
CC The condition is diabetic retinopathy, psoriasis, arthropathy,
CC hemangioma, vascularised malignant or benign tumour, post-recovery
CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
CC trauma, substance-induced neovascularisation of the liver, excessive
CC hormone-related angiogenic dysfunction, diabetes induced neovascular
CC sequelae, hypertension induced neovascular sequelae, or chronic liver
CC infection. The peptides are also used to modulate vascular permeability
CC in a mammal (the mammal has a condition characterised by fluid
CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
CC or brain. The peptides are used to image blood vessels and lymphatic
CC vasculature. The monomeric and bicyclic peptides are used to interfere

CC with at least one biological activity induced by VEGF, VEGF-C or -D and
CC are also used in combination with an anti-inflammatory agent, to treat a
CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
CC diabetic retinopathy

XX Sequence 17 AA;

XX Query Match 84.7%; Score 61; DB 4; Length 17;
XX Best Local Similarity 76.9%; Pred. No. 0.0021;
XX Matches 10; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

OY 1 CASDLGKSTNTFC 13
|||::|||::|
Db 1 CASDVGKSTNTWC 13

RESULT 13
AAU04522

ID AAU04522 standard; protein; 73 AA.

XX AAU04522;

XX 26-SEP-2001 (first entry)

XX Human VEGF-D amino acids Val101-Thr 173.

XX Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation.

XX Homo sapiens.

XX WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
PT from an exposed loop of a growth factor protein by oxidizing the cysteine
PT residues.

XX Example 1; Page 90-91; 102pp; English.

XX The sequence represents Human VEGF-D (vascular endothelial growth factor)
CC amino acids Val101-Thr 173, used together with the C-terminal 23 residues
CC of VEGF to make a hybrid theoretical molecule for 3 dimensional
CC modelling. The sequence is used in a method of producing a monomeric
CC monocyclic peptide by a measuring beta-beta carbon separation distances
CC on opposite antiparallel strands of a peptide loop fragment from an
CC exposed loop of a growth factor protein and cyclising the peptide by
CC oxidising the cysteine residues. The monocyclic peptides, dimeric
CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
CC peptide with at least one amino acid deleted prior to cyclisation are
CC used to interfere with angiogenesis, neovascularisation or
CC lymphangiogenesis in a mammal with a condition characterised by
CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
CC malignant or benign tumour, post-recovery cerebrovascular accident, post-
CC angioplasty restenosis, head, heat or cold trauma, substance-induced
CC neovascularisation of the liver, excessive hormone-related angiogenic
CC dysfunction, diabetes induced neovascular sequelae, hypertension induced

CC neovascular sequelae, or chronic liver infection. The peptides are also
 CC used to modulate vascular permeability in a mammal (the mammal has a
 CC condition characterised by fluid accumulation in peripheral limbs or in
 CC lungs, peritoneal cavity, pleura, or brain. The peptides are used to
 CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
 CC peptides are used to interfere with at least one biological activity
 CC induced by VEGF, VEGF-C or -D and are also used in combination with an
 CC anti-inflammatory agent, to treat a chronic inflammation, especially
 CC rheumatoid arthritis, psoriasis and diabetic retinopathy
 XX
 SQ Sequence 73 AA;

Query Match 75.0%; Score 54; DB 4; Length 73;
 Best Local Similarity 100.0%; Pred. No. 0.15;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ASELGKSTNTF 12
 Db 21 ASELGKSTNTF 31
 |||||

RESULT 14
 AAU04520
 ID AAU04520 standard; protein; 96 AA.
 AC AAU04520;

DT 26-SEP-2001 (first entry)

DE Human VEGF-D amino acids Val101-PRO186.

XX Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation.

OS Homo sapiens.

XX WO200152875-A1.

PN 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 19-JAN-2000; 2000US-0176293P.

PR 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

PA Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.

PS Example 1; Page 89; 102pp; English.

XX The sequence represents Human VEGF-D (vascular endothelial growth factor)
 CC amino acids Val101-PRO186. The sequence is used in a method of producing
 CC a monomeric monocyclic peptide by a measuring beta-beta carbon separation
 CC distances on opposite antiparallel strands of a peptide loop fragment
 CC from an exposed loop of a growth factor protein and cyclising the peptide
 CC by oxidising the cysteine residues. The monocyclic peptides, dimeric
 CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
 CC peptide with at least one amino acid deleted prior to cyclisation are
 CC used to interfere with angiogenesis, neovascularisation or
 CC lymphangiogenesis in a mammal with a condition characterised by
 CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
 CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
 CC malignant or benign tumour, post-recovery cerebrovascular accident, post-

CC angioplasty restenosis, head, heat or cold trauma, substance-induced
 CC neovascularisation of the liver, excessive hormone-related angiogenic
 CC dysfunction, diabetes induced neovascular sequelae, hypertension induced
 CC neovascular sequelae, or chronic liver infection. The peptides are also
 CC used to modulate vascular permeability in a mammal (the mammal has a
 CC condition characterised by fluid accumulation in peripheral limbs or in
 CC lungs, peritoneal cavity, pleura, or brain. The peptides are used to
 CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
 CC peptides are used to interfere with at least one biological activity
 CC induced by VEGF, VEGF-C or -D and are also used in combination with an
 CC anti-inflammatory agent, to treat a chronic inflammation, especially
 CC rheumatoid arthritis, psoriasis and diabetic retinopathy
 XX
 SQ Sequence 96 AA;

Query Match 75.0%; Score 54; DB 4; Length 96;
 Best Local Similarity 100.0%; Pred. No. 0.2;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ASELGKSTNTF 12
 Db 21 ASELGKSTNTF 31
 |||||

RESULT 15
 AAY23889
 ID AAY23889 standard; protein; 109 AA.
 XX AAY23889;

DT 21-SEP-1999 (first entry)

DE Human vascular endothelial growth factor (VEGF)-D.

XX Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
 KW tumour; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
 KW wound healing; lymphedema; scleroderma; anhydrotic ectodermal dysplasia.

OS Homo sapiens.

XX WO9933485-A1.

PN 08-JUL-1999.

XX 23-DEC-1998; 98WO-US027373.

XX 24-DEC-1997; 97AU-00001131.

PR 29-MAY-1998; 98US-0087392P.

XX (LUDW-) LUDWIG INST CANCER RES.

PA Achen MG, Stacker SA, Alitalo K;

XX WPI; 1999-405368/34.

XX A human cell line stably expressing vascular endothelial growth factor D,
 PT useful for treating melanomas or tumors expressing VEGF-D.

PS Claim 6; Page 72; 79pp; English.

XX The present sequence represents human vascular endothelial growth factor
 CC (VEGF)-D. The specification describes a human cell line which stably
 CC expresses VEGF-D, or fragments/analogs having VEGF-D biological
 CC activity. VEGF-D antagonists, e.g. antisense nucleic acids or triplex
 CC DNA, VEGF-D variants or antibodies (especially chimeric antibodies), are
 CC useful for the treatment or alleviation of malignant melanomas, tumours
 CC or psoriasis. Angiogenesis and lymphangiogenesis stimulating amounts of
 CC VEGF-D can be administered to enhance the acceptance and/or healing of
 CC skin grafts or to stimulate the healing of a surgical or traumatic wound
 CC to the skin. Lymphangiogenesis stimulating amounts of VEGF-D can be used
 CC to treat lymphedema. Endothelial proliferation stimulating amounts of
 CC VEGF-D are used to treat scleroderma. Vascularisation stimulating amounts
 CC of VEGF-D can be used to treat anhydrotic ectodermal dysplasia. VEGF-D

CC antibodies are useful for detecting tumours expressing VEGF-D. Fully-processed VEGF-D can be used to stimulate at least one VEGF-D bioactivity
CC chosen from endothelial cell proliferation, migration, survival and
CC differentiation and lymphangiogenesis without inducing vascular
CC permeability
XX
SQ Sequence 109 AA;

Query Match 75.0%; Score 54; DB 2; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.23;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ASELGKSTNTF 12
| | | | | | | | | |
Db 29 ASELGKSTNTF 39

Search completed: September 5, 2004, 09:55:09
Job time : 43.6768 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: September 5, 2004, 10:00:15 ; Search time 36.5051 Seconds
(without alignments)
112.199 Million cell updates/sec

Title: US-09-761-636A-5

Perfect score: 72

Sequence: 1 CASELGKSTNTFC 13

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1298764 seqs, 315065143 residues

Total number of hits satisfying chosen parameters: 1298764

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:*

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18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	72	100.0	17	US-09-761-636A-8	Sequence 8, Appli
3	69	95.8	13	US-09-761-636A-15	Sequence 15, Appli
4	69	95.8	17	US-09-761-636A-27	Sequence 27, Appli
5	69	95.8	17	US-09-761-636A-31	Sequence 31, Appli
6	65	90.3	13	US-09-761-636A-16	Sequence 16, Appli
7	65	90.3	13	US-09-761-636A-18	Sequence 18, Appli
8	65	90.3	17	US-09-761-636A-28	Sequence 28, Appli
9	65	90.3	17	US-09-761-636A-30	Sequence 30, Appli
10	65	90.3	17	US-09-761-636A-32	Sequence 32, Appli
11	61	84.7	13	US-09-761-636A-17	Sequence 17, Appli
12	61	84.7	17	US-09-761-636A-29	Sequence 29, Appli
13	54	75.0	73	US-09-761-636A-3	Sequence 3, Appli
14	54	75.0	96	US-09-761-636A-1	Sequence 1, Appli
15	54	75.0	109	US-09-956-095-3	Sequence 3, Appli

16	54	75.0	109	9	US-09-219-345A-1	Sequence 1, Appli
17	54	75.0	109	16	US-10-779-731-1	Sequence 1, Appli
18	54	75.0	197	12	US-10-352-153-8	Sequence 8, Appli
19	54	75.0	280	13	US-10-044-622-1	Sequence 1, Appli
20	54	75.0	325	14	US-10-274-953-3	Sequence 3, Appli
21	54	75.0	325	14	US-10-161-694-3	Sequence 3, Appli
22	54	75.0	354	9	US-09-956-095-2	Sequence 2, Appli
23	54	75.0	354	9	US-09-219-345A-11	Sequence 11, Appli
24	54	75.0	354	10	US-09-795-006A-119	Sequence 119, App
25	54	75.0	354	10	US-09-375-248-6	Sequence 6, Appli
26	54	75.0	354	12	US-09-765-534B-22	Sequence 22, Appli
27	54	75.0	354	12	US-10-661-740-6	Sequence 6, Appli
28	54	75.0	354	14	US-10-262-538-26	Sequence 26, Appli
29	54	75.0	354	14	US-10-274-953-5	Sequence 5, Appli
30	54	75.0	354	14	US-10-161-694-5	Sequence 5, Appli
31	54	75.0	354	14	US-10-174-930-1	Sequence 1, Appli
32	54	75.0	362	13	US-10-139-876-4	Sequence 4, Appli
33	51	70.8	48	13	US-10-139-876-5	Sequence 5, Appli
34	51	70.8	81	13	US-10-086-623-18	Sequence 18, Appli
35	51	70.8	81	14	US-10-260-539-18	Sequence 18, Appli
36	51	70.8	110	10	US-09-847-524-6	Sequence 6, Appli
37	51	70.8	321	10	US-09-847-524-4	Sequence 4, Appli
38	51	70.8	321	14	US-10-274-953-9	Sequence 9, Appli
39	51	70.8	321	14	US-10-161-694-9	Sequence 9, Appli
40	51	70.8	358	9	US-09-852-209A-13	Sequence 13, Appli
41	51	70.8	358	10	US-09-847-524-2	Sequence 2, Appli
42	51	70.8	358	12	US-10-439-337A-13	Sequence 13, Appli
43	51	70.8	358	12	US-10-303-997B-13	Sequence 13, Appli
44	51	70.8	358	13	US-10-139-876-2	Sequence 2, Appli
45	51	70.8	358	14	US-10-131-600-13	Sequence 13, Appli

ALIGNMENTS

RESULT 1
US-09-761-636A-5
; Sequence 5, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: GENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 5
; LENGTH: 13
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-761-636A-5

Query Match 100.0%; Score 72; DB 9; Length 13;
Best Local Similarity 100.0%; Pred. No. 6.6e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 1 CASELGKSTNTFC 13

RESULT 2
US-09-761-636A-8
; Sequence 8, Application US/09761636A
; Patent No. US20020065218A1

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; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 8
; LENGTH: 17
; TYPE: PRT
; ORGANISM: Homo sapiens
; ORGANISM: synthetic construct
US-09-761-636A-8

Query Match          100.0%; Score 72; DB 9; Length 17;
Best Local Similarity 100.0%; Pred. No. 8.7e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFC 13
Db 1 CASELGKSTNTFC 13

RESULT 3
US-09-761-636A-15
; Sequence 15, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 15
; LENGTH: 13
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-15

Query Match          95.8%; Score 69; DB 9; Length 13;
Best Local Similarity 92.3%; Pred. No. 2.2e-05;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFC 13
Db 1 CASELGKSTNTFC 13

RESULT 4
US-09-761-636A-27
; Sequence 27, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 27
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-27

Query Match          95.8%; Score 69; DB 9; Length 17;
Best Local Similarity 92.3%; Pred. No. 3e-05;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFC 13
Db 1 CASELGKSTNTFC 13

RESULT 5
US-09-761-636A-31
; Sequence 31, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 31
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-31

Query Match          95.8%; Score 69; DB 9; Length 17;
Best Local Similarity 92.3%; Pred. No. 3e-05;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFC 13
Db 1 CASELGKSTNTFC 13

RESULT 6
US-09-761-636A-16
; Sequence 16, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
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; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 16
; LENGTH: 13
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-16

Query Match 90.3%; Score 65; DB 9; Length 13;
Best Local Similarity 84.6%; Pred. No. 0.00011;
Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 1 CASELGRSTNSFC 13

RESULT 7

US-09-761-636A-18
; Sequence 18, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-05-16
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 18
; LENGTH: 13
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-18

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Best Local Similarity 84.6%; Pred. No. 0.00011;
Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 1 CASELGRSTNSFC 13

RESULT 8

US-09-761-636A-28
; Sequence 28, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-05-16
; SOFTWARE: PatentIn version 3.0

; SEQ ID NO 28
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-28

Query Match 90.3%; Score 65; DB 9; Length 17;
Best Local Similarity 84.6%; Pred. No. 0.00015;
Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 1 CASELGRSTNSFC 13

RESULT 9

US-09-761-636A-30
; Sequence 30, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-05-16
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 30
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-30

Query Match 90.3%; Score 65; DB 9; Length 17;
Best Local Similarity 84.6%; Pred. No. 0.00015;
Matches 11; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 1 CASELGRSTNSFC 13

RESULT 10

US-09-761-636A-32
; Sequence 32, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-05-16
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 32
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-32

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Matches		11;	Conservative	2;	Mismatches 0; Indels 0; Gaps 0;
QY	1 CASELGKSTNTFC 13				
Db	1 CASELGRSTNSFC 13				
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; Patent No. US20020065218A1					
; GENERAL INFORMATION:					
; APPLICANT: ACHEN, Marc					
; APPLICANT: STACKER, Steven					
; APPLICANT: HUGHES, Richard					
; APPLICANT: CENDRON, Angela					
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR					
; FILE REFERENCE: 1064/48505 Achen et al					
; CURRENT APPLICATION NUMBER: US/09/761.636A					
; CURRENT FILING DATE: 2001-01-18					
; PRIOR APPLICATION NUMBER: US 60/176,293					
; PRIOR FILING DATE: 2000-01-18					
; PRIOR APPLICATION NUMBER: US 60/204,590					
; PRIOR FILING DATE: 2000-05-16					
; NUMBER OF SEQ ID NOS: 34					
; SOFTWARE: PatentIn version 3.0					
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; LENGTH: 13					
; TYPE: PRT					
; ORGANISM: synthetic construct					
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Matches		10;	Conservative	3;	Mismatches 0; Indels 0; Gaps 0;
QY	1 CASELGKSTNTFC 13				
Db	1 CASDVGKSTNTWC 13				
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; Sequence 29, Application US/09761636A					
; Patent No. US20020065218A1					
; GENERAL INFORMATION:					
; APPLICANT: ACHEN, Marc					
; APPLICANT: STACKER, Steven					
; APPLICANT: HUGHES, Richard					
; APPLICANT: CENDRON, Angela					
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR					
; FILE REFERENCE: 1064/48505 Achen et al					
; CURRENT APPLICATION NUMBER: US/09/761.636A					
; CURRENT FILING DATE: 2001-01-18					
; PRIOR APPLICATION NUMBER: US 60/176,293					
; PRIOR FILING DATE: 2000-01-18					
; PRIOR APPLICATION NUMBER: US 60/204,590					
; PRIOR FILING DATE: 2000-05-16					
; NUMBER OF SEQ ID NOS: 34					
; SOFTWARE: PatentIn version 3.0					
; SEQ ID NO 29					
; LENGTH: 17					
; TYPE: PRT					
; ORGANISM: synthetic construct					
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Best Local Similarity		76.9%;	Pred. No. 0.00078;		
Matches		10;	Conservative	3;	Mismatches 0; Indels 0; Gaps 0;

Query Match		75.0%;	Score 54;	DB 9;	Length 73;
Best Local Similarity		100.0%;	Pred. No. 0.062;		
Matches		11;	Conservative	0;	Mismatches 0; Indels 0; Gaps 0;
QY	2 ASELGKSTNTF 12				
Db	21 ASELGKSTNTF 31				
RESULT 14					
US-09-761-636A-1					
; Sequence 1, Application US/09761636A					
; Patent No. US20020065218A1					
; GENERAL INFORMATION:					
; APPLICANT: ACHEN, Marc					
; APPLICANT: STACKER, Steven					
; APPLICANT: HUGHES, Richard					
; APPLICANT: CENDRON, Angela					
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR					
; FILE REFERENCE: 1064/48505 Achen et al					
; CURRENT APPLICATION NUMBER: US/09/761.636A					
; CURRENT FILING DATE: 2001-01-18					
; PRIOR APPLICATION NUMBER: US 60/176,293					
; PRIOR FILING DATE: 2000-01-18					
; PRIOR APPLICATION NUMBER: US 60/204,590					
; PRIOR FILING DATE: 2000-05-16					
; NUMBER OF SEQ ID NOS: 34					
; SOFTWARE: PatentIn version 3.0					
; SEQ ID NO 1					
; LENGTH: 96					
; TYPE: PRT					
; ORGANISM: Homo sapiens					
; FEATURE:					
; NAME/KEY: misc feature					
; OTHER INFORMATION: Amino acid residues of Vall01-Pro196 of VEGF-D					
US-09-761-636A-1					
Query Match		75.0%;	Score 54;	DB 9;	Length 96;
Best Local Similarity		100.0%;	Pred. No. 0.083;		
Matches		11;	Conservative	0;	Mismatches 0; Indels 0; Gaps 0;

QY 2 ASELGKSTNTF 12
| | | | |
Db 21 ASELGKSTNTF 31

RESULT 15
US-09-956-095-3
; Sequence 3, Application US/09956095
; Patent No. US20020102260A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steven A.
; TITLE OF INVENTION: METHODS FOR TREATING NEOPLASTIC DISEASE CHARACTERIZED BY
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR D EXPRESSION, FOR SCREENING
; TITLE OF INVENTION: FOR NEOPLASTIC DISEASE OR METASTATIC RISK AND FOR MAINTAINING
; TITLE OF INVENTION: VASCULARIZATION OF TISSUE
; FILE REFERENCE: 1064/48666PC
; CURRENT APPLICATION NUMBER: US/09/956,095
; CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 09/796,714
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/234,196
; PRIOR FILING DATE: 2000-09-20
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-956-095-3

Query Match 75.0%; Score 54; DB 9; Length 109;
Best Local Similarity 100.0%; Pred.No. 0.095;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ASELGKSTNTF 12
| | | | |
Db 29 ASELGKSTNTF 39

Search completed: September 5, 2004, 10:29:18
Job time : 37.5051 secs

This Page Blank (uspto)

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:55:30 ; Search time 11.5556 Seconds
(without alignments)
58.079 Million cell updates/sec

Title: US-09-761-636A-5

Perfect score: 72

Sequence: 1 CASELGKSTNTFC 13

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:*

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2: /cgn2_6/ptodata/2/iaa/5B COMB.pcp.*
3: /cgn2_6/ptodata/2/iaa/6A COMB.pcp.*
4: /cgn2_6/ptodata/2/iaa/6B COMB.pcp.*
5: /cgn2_6/ptodata/2/iaa/PCRTUS COMB.pcp.*
6: /cgn2_6/ptodata/2/iaa/backfiles1.pcp.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	54	75.0	109	4	US-09-469-186-1
2	54	75.0	109	4	US-09-469-185-1
3	54	75.0	197	4	US-09-431-888-8
4	54	75.0	325	3	US-08-915-795-3
5	54	75.0	354	3	US-08-915-795-5
6	51	70.8	321	3	US-08-915-795-9
7	51	70.8	358	3	US-08-915-795-8
8	43	59.7	83	3	US-08-875-811-2
9	43	59.7	83	4	US-09-071-672-3
10	43	59.7	83	4	US-09-386-119-3
11	43	59.7	104	1	US-08-283-971-1
12	43	59.7	104	1	US-07-921-619-1
13	43	59.7	104	1	US-08-467-955-1
14	43	59.7	104	1	US-08-467-955-2
15	43	59.7	104	1	US-08-891-848-13
16	43	59.7	104	3	US-08-875-811-1
17	43	59.7	104	3	US-09-394-268-1
18	43	59.7	104	3	US-09-394-268-2
19	43	59.7	104	4	US-09-071-672-1
20	43	59.7	104	4	US-09-687-748-1
21	43	59.7	104	4	US-09-687-748-2
22	43	59.7	104	4	US-08-626-288-1
23	43	59.7	104	4	US-08-626-288-2
24	43	59.7	104	4	US-09-095-429-1
25	43	59.7	104	4	US-09-095-429-2
26	43	59.7	104	4	US-09-986-119-1
27	43	59.7	105	3	US-08-875-811-24

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28 43 59.7 105 3 US-08-875-811-26 Sequence 26, Appl
29 43 59.7 105 3 US-08-875-811-39 Sequence 39, Appl
30 43 59.7 106 3 US-08-875-811-28 Sequence 28, Appl
31 43 59.7 107 3 US-08-875-811-20 Sequence 20, Appl
32 43 59.7 107 3 US-08-875-811-30 Sequence 30, Appl
33 43 59.7 111 3 US-08-875-811-22 Sequence 22, Appl
34 43 59.7 112 3 US-08-875-811-32 Sequence 32, Appl
35 43 59.7 129 3 US-08-875-811-63 Sequence 63, Appl
36 43 59.7 251 3 US-08-875-811-59 Sequence 59, Appl
37 43 59.7 254 3 US-08-875-811-61 Sequence 61, Appl
38 43 59.7 355 3 US-08-875-811-41 Sequence 41, Appl
39 43 59.7 355 3 US-08-875-811-49 Sequence 49, Appl
40 43 59.7 355 3 US-08-875-811-57 Sequence 57, Appl
41 43 59.7 355 3 US-08-875-811-64 Sequence 64, Appl
42 43 59.7 358 3 US-08-875-811-51 Sequence 51, Appl
43 43 59.7 366 3 US-08-875-811-55 Sequence 55, Appl
44 43 59.7 379 3 US-08-875-811-43 Sequence 43, Appl
45 38 52.8 496 3 US-08-889-841B-12 Sequence 12, Appl

```

ALIGNMENTS

RESULT 1

US-09-469-186-1

; Sequence 1, Application US/09469186

; Patent No. 6383484

; GENERAL INFORMATION:

; APPLICANT: STACKER, Steve A.

; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF

; FILE REFERENCE: ACHEN et al-1064-44660

; CURRENT APPLICATION NUMBER: US/09/469,186

; CURRENT FILING DATE: 1999-12-21

; EARLIER APPLICATION NUMBER: 60/113,254

; EARLIER FILING DATE: 1998-12-21

; EARLIER APPLICATION NUMBER: 60/134,556

; EARLIER FILING DATE: 1999-05-17

; NUMBER OF SEQ ID NOS: 1

; SOFTWARE: Patentin Ver. 2.0

; SEQ ID NO 1

; LENGTH: 109

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-469-186-1

Query Match 75.0%; Score 54; DB 4; Length 109;

Best Local Similarity 100.0%; Pred. No. 0.047; 0;

Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ASELGKSTNTF 12

DB 29 ASELGKSTNTF 39

RESULT 2

US-09-469-185-1

; Sequence 1, Application US/09469185

; Patent No. 6531185

; GENERAL INFORMATION:

; APPLICANT: ACHEN, Marc G.

; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF

; FILE REFERENCE: ACHEN et al-1064-44660

; CURRENT APPLICATION NUMBER: US/09/469,185

; CURRENT FILING DATE: 1999-12-21

; EARLIER APPLICATION NUMBER: 60/113,254

; EARLIER FILING DATE: 1998-12-21

; EARLIER APPLICATION NUMBER: 60/134,556

; EARLIER FILING DATE: 1999-05-17

; NUMBER OF SEQ ID NOS: 1

; SOFTWARE: Patentin Ver. 2.0

; SEQ ID NO 1

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; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-469-185-1

Query Match          75.0%; Score 54; DB 4; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.047;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      2 ASELGKSTNTF 12
Db      29 ASELGKSTNTF 39

RESULT 3
US-09-431-888-8
; Sequence 8, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stackel, Stephen
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS NZ2 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431.833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431.888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800
; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-431-888-8

Query Match          75.0%; Score 54; DB 4; Length 197;
Best Local Similarity 100.0%; Pred. No. 0.086;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      2 ASELGKSTNTF 12
Db      45 ASELGKSTNTF 55

RESULT 4
US-08-915-795-3
; Sequence 3, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 354 amino acids
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA: US/08/915,795
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 325 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: Human Breast
US-08-915-795-3

Query Match          75.0%; Score 54; DB 3; Length 325;
Best Local Similarity 100.0%; Pred. No. 0.14;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      2 ASELGKSTNTF 12
Db      92 ASELGKSTNTF 102

RESULT 5
US-08-915-795-5
; Sequence 5, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 354 amino acids
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TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: Human Lung
 US-08-915-795-5

Query Match 75.0%; Score 54; DB 3; Length 354;
 Best Local Similarity 100.0%; Pred. No. 0.16;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ASELGKSTNTF 12
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 Db 121 ASELGKSTNTF 131

RESULT 6

US-08-915-795-9
 ; Sequence 9, Application US/08915795
 ; Patent No. 6235713
 ; GENERAL INFORMATION:

APPLICANT: Marc G. ACHEN
 APPLICANT: Andrew F. WILKS
 APPLICANT: Steven A. STACKER
 APPLICANT: Kari ALITALO
 TITLE OF INVENTION: GROWTH FACTOR
 NUMBER OF SEQUENCES: 11
 CORRESPONDENCE ADDRESS:

ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
 STREET: 1200 G Street, NW, Suite 700
 CITY: Washington
 STATE: DC

COUNTRY: United States of America
 ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/915,795
 FILING DATE:

CLASSIFICATION: 536

ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D.
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 1064/42983
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 TELEX: N/A

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:
 LENGTH: 321 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 ORIGINAL SOURCE:
 TISSUE TYPE: Mouse Lung
 US-08-915-795-9

Query Match 70.8%; Score 51; DB 3; Length 321;
 Best Local Similarity 90.9%; Pred. No. 0.46;
 Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 2 ASELGKSTNTF 12
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 Db 121 ASELGKSTNTF 131

RESULT 7

US-08-915-795-8
 ; Sequence 8, Application US/08915795
 ; Patent No. 6235713
 ; GENERAL INFORMATION:

APPLICANT: Marc G. ACHEN
 APPLICANT: Andrew F. WILKS
 APPLICANT: Steven A. STACKER
 APPLICANT: Kari ALITALO
 TITLE OF INVENTION: GROWTH FACTOR
 NUMBER OF SEQUENCES: 11
 CORRESPONDENCE ADDRESS:

ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
 STREET: 1200 G Street, NW, Suite 700
 CITY: Washington
 STATE: DC

COUNTRY: United States of America
 ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/915,795
 FILING DATE:

CLASSIFICATION: 536

ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D.
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 1064/42983
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 TELEX: N/A

INFORMATION FOR SEQ ID NO: 8:

SEQUENCE CHARACTERISTICS:
 LENGTH: 358 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 ORIGINAL SOURCE:
 TISSUE TYPE: Mouse Lung
 US-08-915-795-8

Query Match 70.8%; Score 51; DB 3; Length 358;
 Best Local Similarity 90.9%; Pred. No. 0.52;
 Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 2 ASELGKSTNTF 12
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 Db 126 ASELGKSTNTF 136

RESULT 8

US-08-875-811-2
 ; Sequence 2, Application US/08875811
 ; Patent No. 6045793
 ; GENERAL INFORMATION:

APPLICANT: Rybak, Susanna M.
 APPLICANT: Newton, Dianne L.
 APPLICANT: Boque, Lluís
 APPLICANT: Wlodawer, Alexander
 TITLE OF INVENTION: Recombinant Ribonuclease Proteins
 NUMBER OF SEQUENCES: 64
 CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP
 STREET: Two Embarcadero Center, Eighth Floor
 CITY: San Francisco
 STATE: California
 COUNTRY: USA
 ZIP: 94111-3834

```

; APPLICATION NUMBER: US 60/046,895
; FILING DATE: 02-MAY-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 015280-32510US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 83 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..83
; OTHER INFORMATION: /note= "onc protein", positions 16-98
;
; US-09-071-672-3
;
Query Match          59.7%; Score 43; DB 4; Length 83;
Best Local Similarity 61.5%; Pred. No. 2.6;
Matches      8; Conservative    1; Mismatches   4; Indels     0;

QY       1 CASELGKSTNFC 13      | : : |||||
Db        60 CKYLKKSTNKFC 72    | : : |||||

RESULT 10
US-09-986-119-3
; Sequence 3, Application US/09986119
; Patent No. 6653104
; GENERAL INFORMATION:
; APPLICANT: Rybak, Susanna M.
;           Newton, Dianne L.
;           Goldenberg, David M.
; TITLE OF INVENTION: Immunotoxins Directed Against Malignant
;                   Cells
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/986,119
; FILING DATE: 07-No. 6653104-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/071,672
; FILING DATE: 01-MAY-1998
; APPLICATION NUMBER: US 60/046,895
; FILING DATE: 02-MAY-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Weber, Ellen Lauver
; REGISTRATION NUMBER: 32,762
; REFERENCE/DOCKET NUMBER: 015280-32510US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:

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; ORIGINAL SOURCE:
; ORGANISM: Rana pipiens
; DEVELOPMENTAL STAGE: Embryo
US-08-283-971-1
Query Match 59.7%; Score 43; DB 1; Length 104;
Best Local Similarity 61.5%; Pred. No. 3.3;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 CASELGKSTWTF 13
DB 75 CRYKLKSTNKF 87
| : | | | |
| : | | | |

RESULT 12
US-07-921-619-1
; Sequence 1, Application US/07921619
; Patent No. 5595734
; GENERAL INFORMATION:
; APPLICANT: Ardelt Ph. D. Wojciech J.
; APPLICANT: Mikulski, Stanislaw M.
; TITLE OF INVENTION: PHARMACEUTICAL FOR TREATING TUMORS IN HUMANS
; NUMBER OF SEQUENCES: 1
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Mark H. Jay, P.C.
; STREET: P.O. Box 020083, General Post Office
; CITY: Brooklyn
; STATE: New York
; COUNTRY: USA
; ZIP: 11202-0002
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.24
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/921,619
; FILING DATE: 19920728
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/178,118
; FILING DATE: 06-APR-1988
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/436,141
; FILING DATE: 13-NOV-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Jay, Mark H.
; REGISTRATION NUMBER: 27507
; REFERENCE/DOCKET NUMBER: 5005 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 718-625-0399
; TELEFAX: 718-625-0399
; TELEX: No. 5595734 Applicable
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 104 amino acids
; TYPE: AMINO ACID
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: N
; ANTI-SENSE: N
; FRAGMENT TYPE: N-terminal
; ORIGINAL SOURCE:
; ORGANISM: Rana pipiens
; DEVELOPMENTAL STAGE: Embryo
US-07-921-619-1
Query Match 59.7%; Score 43; DB 1; Length 104;
Best Local Similarity 61.5%; Pred. No. 3.3;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

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Db          : : | | | | | |
            75 CKYKLGKSTNFKC 87

RESULT 13
US-08-467-955-1
; Sequence 1, Application US/08467955
; Patent No. 5728805
; GENERAL INFORMATION:
; APPLICANT: Ardelt Ph.D, Wojciech J.
; TITLE OF INVENTION: PHARMACEUTICALS AND METHOD FOR MAKING THEM
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Mark H. Jay, P.A.
; STREET: P.O. Box E
; CITY: Short Hills
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07078-0383
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.24
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/467,955
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/178,118
; FILING DATE: 06-APR-1988
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/436,141
; FILING DATE: 13-NOV-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/814,332
; FILING DATE: 03-FEB-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/283,970
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Jay, Mark H.
; REGISTRATION NUMBER: 27507
; REFERENCE/DOCKET NUMBER: 5007 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 201-912-9066
; TELEFAX: 201-912-0442
; TELEX: No. 5728805 Applicable
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 104 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: N
; ANTI-SENSE: N
; FRAGMENT TYPE: N-terminal
; ORIGINAL SOURCE:
; ORGANISM: Rana pipiens
; DEVELOPMENTAL STAGE: Oocyte
;
US-08-467-955-1

Query Match          59.7%; Score 43; DB 1; Length 104;
Best Local Similarity 61.5%; Pred. No. 3.3;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY          1 CASELGKSTNTFC 13
Db          : : | | | | | |
            75 CKYKLGKSTNFKC 87

RESULT 14
US-08-467-955-1
; Sequence 1, Application US/08467955
; Patent No. 5728805
; GENERAL INFORMATION:
; APPLICANT: Ardelt Ph.D, Wojciech J.
; TITLE OF INVENTION: PHARMACEUTICALS AND METHOD FOR MAKING THEM
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Mark H. Jay, P.A.
; STREET: P.O. Box E
; CITY: Short Hills
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07078-0383
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.24
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/467,955
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/178,118
; FILING DATE: 06-APR-1988
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/436,141
; FILING DATE: 13-NOV-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/814,332
; FILING DATE: 03-FEB-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/283,970
; FILING DATE: 01-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Jay, Mark H.
; REGISTRATION NUMBER: 27507
; REFERENCE/DOCKET NUMBER: 5007 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 201-912-9066
; TELEFAX: 201-912-0442
; TELEX: No. 5728805 Applicable
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 104 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: N
; ANTI-SENSE: N
; FRAGMENT TYPE: N-terminal
; ORIGINAL SOURCE:
; ORGANISM: Rana pipiens
; DEVELOPMENTAL STAGE: Oocyte
;
US-08-467-955-1

Query Match          59.7%; Score 43; DB 1; Length 104;
Best Local Similarity 61.5%; Pred. No. 3.3;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY          1 CASELGKSTNTFC 13
Db          : : | | | | | |
            75 CKYKLGKSTNFKC 87

RESULT 15
US-08-891-848-13
; Sequence 13, Application US/08891848
; Patent No. 5955073
; GENERAL INFORMATION:
; APPLICANT: Rybak, Susanna M.
```


APPLICANT: Youle, Richard J.
APPLICANT: Newton, Dianne L.
APPLICANT: Nicholls, Peter J.
TITLE OF INVENTION: Selective RNase Cytotoxic Reagents
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/891,848
FILING DATE: No. 5955073 yet assigned
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/125,462
FILING DATE: 22-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/014,082
FILING DATE: 04-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/779,195
FILING DATE: 22-OCT-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/510,696
FILING DATE: 20-APR-1990
ATTORNEY/AGENT INFORMATION:
NAME: Weber, Ellen Lauver
REGISTRATION NUMBER: 32,762
REFERENCE/DOCKET NUMBER: 015280-110310US
TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 104 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 1..104
OTHER INFORMATION: /label= Onc
OTHER INFORMATION: /note= "Onconase from Rana pipiens"
US-08-891-848-13

Query Match 59.7%; Score 43; DB 2; Length 104;
Best Local Similarity 61.5%; Pred. No. 3.3;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 75 CKYKLKSTNKEC 87

Search completed: September 5, 2004, 10:21:56
Job time : 12.5556 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:47:29 ; Search time 6.14141 Seconds
(without alignments)
125.302 Million cell updates/sec

Title: US-09-761-636A-6

Perfect score: 46

Sequence: 1 CNEESLIC 8

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

PIR 78:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	36	78.3	120	2 A33787	vascular endotheli
2	36	78.3	133	2 B49530	vascular endotheli
3	36	78.3	146	2 S57956	ovine vascular end
4	36	78.3	190	2 B40080	vascular endotheli
5	36	78.3	1115	2 A45761	Ca2+-transporting
6	35	76.1	4427	2 PNO637	polyketide synthas
7	34.5	75.0	351	2 T42421	probable nucleopor
8	34.5	75.0	1778	2 T50074	probable cation ef
9	34	73.9	295	2 H71078	cytochrome P450 1b
10	34	73.9	501	1 A40938	L-asparatase oxidas
11	34	73.9	642	2 T51421	retinoblastoma bin
12	34	73.9	1722	1 I78879	vascular endotheli
13	33	71.7	190	2 B44881	glioma-derived vas
14	33	71.7	190	2 A35987	vascular endotheli
15	33	71.7	214	2 A44881	vascular endotheli
16	33	71.7	291	2 AF0123	probable antigenic
17	33	71.7	325	2 G90130	transcription init
18	33	71.7	350	2 D69143	LPS biosynthesis R
19	33	71.7	551	2 JC7562	glioblastoma RING
20	33	71.7	1786	1 MMHUB1	laminin beta-1 cha
21	32	69.6	169	2 S76289	hypothetical prote
22	32	69.6	183	2 E72459	hypothetical prote
23	32	69.6	190	2 S52130	vascular endotheli
24	32	69.6	232	2 A41551	vascular endotheli
25	32	69.6	272	2 S13587	malate dehydrogena
26	32	69.6	290	2 G97328	uncharacterized co
27	32	69.6	338	2 E86465	hypothetical prote
28	32	69.6	358	2 A82206	protein-glutamate
29	32	69.6	376	2 B72321	conserved hypothet

ALIGNMENTS

RESULT 1

A33787

vascular endothelial growth factor (version 1) - bovine

C:Species: Bos primigenius taurus (cattle)

C>Date: 16-Mar-1990 #sequence_revision 16-Mar-1990 #text_change 05-Nov-1999

C:Accession: A33787

R:Tischer, E.; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Schilling, J.; Lau, K.; Crisp

Biochem. Biophys. Res. Commun. 165, 1198-1206, 1989

A:Title: Vascular endothelial growth factor: a new member of the platelet-derived growth

A:Reference number: A33787; MUID:90121225; PMID:2610687

A:Accession: A33787

A>Status: preliminary

A:Molecule type: mRNA

A:Residues: 1-120 <TIS>

A:Cross-references: GB:M33750; NID:g163810; PIDN:AAA30805.1; PID:g163811

C:Keywords: alternative splicing

Query Match 78.3%; Score 36; DB 2; Length 120;
Best Local Similarity 75.0%; Pred. No. 11;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db 60 CNDESLEC 67

RESULT 2

B49530

vascular endothelial growth factor homolog A2R, 14.7K - Orf virus

C:Species: Orf virus

C>Date: 07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change 08-Oct-1999

C:Accession: B49530

R:Lyttle, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.; Robinson, A.J.

J. Virol. 68, 84-92, 1994

A:Title: Homologs of vascular endothelial growth factor are encoded by the poxvirus orf

A:Reference number: A49530; MUID:94076465; PMID:8254780

A:Contents: NZ2

A:Accession: B49530

A>Status: preliminary

A:Molecule type: DNA

A:Residues: 1-133 <LYT>

A:Cross-references: GB:S67520; NID:g456897; PIDN:AA29220.1; PID:g456899

A>Note: sequence inconsistent with nucleotide translation

A>Note: sequence extracted from NCBI backbone (NCBIN:141420, NCBI:P:141425)

Query Match 78.3%; Score 36; DB 2; Length 133;
Best Local Similarity 75.0%; Pred. No. 12;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db 71 CNDESLEC 78

C>Date: 03-Jun-1993 #sequence_revision 03-Jun-1993 #text_change 19-Apr-2002

C:Accession: A45761
C:Murakami, K.; Tanabe, K.; Takada, S.

J. Cell Sci. 97, 487-495, 1990

A:Title: Structure of a Plasmodium yoelii gene-encoded protein homologous to the Ca(2+)-ATPase

A:Reference number: A45761; MUID:91161669; PMID:2150071

A:Accession: A45761

A>Status: preliminary

A:Molecule type: DNA

A:Residues: 1-115 <MUR>

A:Cross-references: GB:155197; NID:gl0097; PIDN:CAA38982.1; PID:gl0098

C:Superfamily: Na+/K+-transporting ATPase alpha chain; ATPase nucleotide-binding domain

C:Keywords: hydrolase

F:689-866/Domain: ATPase nucleotide-binding domain homology <ATN>

Query Match 78.3%; Score 36; DB 2; Length 1115;

Best Local Similarity 62.5%; Pred. No. 75;

Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8

|||||

Db 486 CNEASILC 493

RESULT 6

PN0637

C:Species: Bacillus subtilis

C:Accession: S25021; PN0637; B69679

C>Date: 19-May-1994 #sequence_revision 06-Feb-1995 #text_change 03-Nov-2000

R:Scotti, C.; Piatti, M.; Cuzzoni, A.; Tognoni, A.; Grandi, G.; Galizzi, A.; Albertini,

submitted to the EMBL Data Library, July 1992

A:Description: A Bacillus subtilis large ORF coding for a polypeptide highly similar to

A:Reference number: S25021

A:Accession: S25021

A>Status: preliminary

A:Molecule type: DNA

A:Residues: 1-4427 <SCO>

A:Cross-references: EMBL:Z14098; NID:g40057; PIDN:CAA78479.1; PID:g40058

R:Scotti, C.; Piatti, M.; Cuzzoni, A.; Perani, P.; Tognoni, A.; Grandi, G.; Galizzi, A.

Gene 130, 65-71, 1993

A:Title: A Bacillus subtilis large ORF coding for a polypeptide highly similar to polyk

A:Reference number: PN0637; MUID:93345824; PMID:8344529

A:Accession: PN0637

A>Status: nucleic acid sequence not shown

A:Molecule type: DNA

A:Residues: 184-282;382-850;926-1115;1409-1648;1665-1761;1876-2344;2469-2560;2609-2702;

R:Kunst, F.; Ogasawara, N.; Moser, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Bertero,

C.; Bron, S.; Brouillet, S.; Bruch, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Cho,

A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E.

Nature 390, 249-256, 1997

A:Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galle,

lech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F.

Koetter, P.; Koningsstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois,

A:Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Mauee,

Y. M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portecell,

Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon,

A:Authors: Schleich, S.; Schroeter, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Sero

akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiyama,

T.; Winters, P.; Wipat, A.; Yamamoto, H.; Yamane, K.; Yasumoto, K.; Yata, K.; Yoshida,

A:Authors: Yoshikawa, H.F.; Zumbstein, E.; Yoshikawa, H.; Danchin, A.

A:Title: The complete genome sequence of the Gram-positive bacterium Bacillus subtilis.

A:Reference number: A69580; MUID:98044033; PMID:9384377

A:Accession: B69679

A>Status: nucleic acid sequence not shown; translation not shown

A:Molecule type: DNA

A:Residues: 1-4427 <KUN>

A:Cross-references: GB:Z99113; GB:AL009136; NID:g2634030; PIDN:CAB13602.1; PID:g2634102

A:Experimental source: strain 168

C:Comment: This enzyme is composed of four synthase units. Unit1 comprises beta-ketosyn

acyl-carrier protein domains. Unit3 comprises beta-ketosynthase, acyl-carrier protein a

C:Genetics:

A:Gene: pksL; pksX

RESULT 3

S57956

C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C>Date: 13-Jan-1996 #sequence_revision 01-Mar-1996 #text_change 05-Nov-1999

C:Accession: S57956

R:Redmer, D.A.; Dai, Y.; Li, J.; Jones, S.C.; Moor, R.M.

submitted to the EMBL Data Library, July 1995

A:Reference number: S57956

A:Accession: S57956

A>Status: preliminary

A:Molecule type: mRNA

A:Residues: 1-146 <RED>

A:Cross-references: EMBL:X89506; NID:g899350; PIDN:CAA61677.1; PID:g899351

Query Match 78.3%; Score 36; DB 2; Length 146;

Best Local Similarity 75.0%; Pred. No. 13;

Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8

|||||

Db 86 CNEESLEC 93

RESULT 4

B40080

C:Species: Bos primigenius taurus (cattle)

C>Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Nov-1999

C:Accession: B40080; B33787; A33255

R:Leung, D.W.; Cachanes, G.; Kuang, W.J.; Goeddel, D.V.; Ferrara, N.

Science 246, 1306-1309, 1989

A:Title: Vascular endothelial growth factor is a secreted angiogenic mitogen.

A:Reference number: A40080; MUID:90069608; PMID:2479986

A:Accession: B40080

A:Molecule type: mRNA

A:Residues: 1-190 <LEU>

A:Cross-references: GB:M32976; NID:gl63006; PIDN:AAA30502.1; PID:gl63007

R:Tischer, E.; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Schilling, J.; Lau, K.; Crisp

Biochem. Biophys. Res. Commun. 165, 1198-1206, 1989

A:Title: Vascular endothelial growth factor: a new member of the platelet-derived growth

A:Reference number: A33787; MUID:90121225; PMID:2610687

A:Accession: B33787

A:Molecule type: mRNA

A:Residues: 27-190 <TIS>

A:Cross-references: GB:M31836; NID:gl63808; PIDN:AAA30804.1; PID:gl63809

R:Ferrara, N.; Henzel, W.J.

Biochem. Biophys. Res. Commun. 161, 851-858, 1989

A:Title: Pituitary follicular cells secrete a novel heparin-binding growth factor specif

A:Reference number: A33255; MUID:89286596; PMID:2735925

A:Accession: A33255

A:Molecule type: protein

A:Residues: 27-31 <FER>

C:Keywords: alternative splicing; glycoprotein

F:1-26/Domain: signal sequence #status predicted <SIG>

F:27-190/Product: vascular endothelial growth factor #status predicted <MAT>

F:100/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 78.3%; Score 36; DB 2; Length 190;

Best Local Similarity 75.0%; Pred. No. 16;

Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8

|||||

Db 86 CNEESLEC 93

RESULT 5

A45761

C:Species: Plasmodium yoelii

C:Accession: A45761

C:Reference number: A45761; MUID:91161669; PMID:2150071

C:Status: preliminary

C:Molecule type: DNA

C:Residues: 1-115 <MUR>

C:Cross-references: GB:155197; NID:gl0097; PIDN:CAA38982.1; PID:gl0098

C:Superfamily: Na+/K+-transporting ATPase alpha chain; ATPase nucleotide-binding domain

C:Keywords: hydrolase

F:689-866/Domain: ATPase nucleotide-binding domain homology <ATN>

C;Superfamily: Bacillus subtilis polyketide synthase pksL; 3-oxoacyl-[acyl-carrier-prote
C;Keywords: acyltransferase; carrier protein
F;343-758/Domain: 3-oxoacyl-[acyl-carrier-protein] synthase I homology <OAS1>
F;1410-1591/Domain: short-chain alcohol dehydrogenase homology <SAD1>
F;1836-2252/Domain: 3-oxoacyl-[acyl-carrier-protein] synthase I homology <OAS2>
F;2485-2559/Domain: acyl carrier protein homology <ACPI>
F;2626-2700/Domain: acyl carrier protein homology <ACPI>
F;2783-3181/Domain: 3-oxoacyl-[acyl-carrier-protein] synthase I homology <OAS3>
F;3576-3774/Domain: short-chain alcohol dehydrogenase homology <SAD2>
F;3852-3922/Domain: acyl carrier protein homology <ACPI>
F;3992-4372/Domain: 3-oxoacyl-[acyl-carrier-protein] synthase I homology <OAS4>
Query Match 76.1%; Score 35; DB 2; Length 4427;
Best Local Similarity 62.5%; Pred. No. 3.7e+02;
Matches 5; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
QY 1 CNEESLIC 8
||||| :|
Db 1205 CNEEQVC 1212
RESULT 7
T42421
hypothetical protein - fission yeast (Schizosaccharomyces pombe) (fragment)
C;Species: Schizosaccharomyces pombe
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 21-Jul-2000
C;Accession: T42421
R;Yoshioaka, S.; Kato, K.; Nakai, K.; Okayama, H.; Nojima, H.
DNA Res. 4, 363-369, 1997
A;Title: Identification of open reading frames in Schizosaccharomyces pombe cDNAs.
A;Reference number: Z17323; MUID:98162722; PMID:9501991
A;Accession: T42421
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-351 <YOS>
A;Cross-references: EMBL:D89145; NID:gl749497; PIDN:BAAL3807.1; PID:gl749498
A;Experimental source: strain PR745
Query Match 75.0%; Score 34.5; DB 2; Length 351;
Best Local Similarity 72.7%; Pred. No. 53;
Matches 8; Conservative 0; Mismatches 0; Indels 3; Gaps 1;
QY 1 CNEESL---IC 8
||||| :|
Db 321 CNEESLTDIC 331
RESULT 8
T50074
Probable nucleoporin [imported] - fission yeast (Schizosaccharomyces pombe)
C;Species: Schizosaccharomyces pombe
C;Date: 09-Jun-2000 #sequence_revision 09-Jun-2000 #text_change 09-Jun-2000
C;Accession: T50074
R;McDougall, R.C.; Rajadream, M.A.; Barrell, B.G.; Seeger, K.; Harris, D.
submitted to the EMBL Data Library, December 1999
A;Reference number: Z25034
A;Accession: T50074
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-1778 <MCD>
A;Cross-references: EMBL:AL133357; PIDN:CAB62415.1; GSPDB:GN00066; SPDB:SPAC1486.05
A;Experimental source: strain 972h(-); cosmid c1486
C;Genetics:
A;Gene: SPDB:SPAC1486.05
A;Map position: 1
A;Introns: 139/2
Query Match 75.0%; Score 34.5; DB 2; Length 1778;
Best Local Similarity 72.7%; Pred. No. 2.1e+02;
Matches 8; Conservative 0; Mismatches 0; Indels 3; Gaps 1;
QY 1 CNEESL---IC 8
||||| :|

Db 1748 CNEESLTDIC 1758
RESULT 9
H71078
probable cation efflux system protein czcD - Pyrococcus horikoshii
C;Species: Pyrococcus horikoshii
C;Date: 14-Aug-1998 #sequence_revision 14-Aug-1998 #text_change 20-Jun-2000
C;Accession: H71078
R;Kawarabayashi, Y.; Sawada, M.; Horikawa, H.; Haikawa, Y.; Hino, Y.; Yamamoto, S.; Seki
M.; Oufuku, Y.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; Kushida, N.; Oguchi
DNA Res. 5, 55-76, 1998
A;Title: Complete sequence and gene organization of the genome of a hyper-thermophilic
A;Reference number: A71000; MUID:98344137; PMID:9679194
A;Accession: H71078
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-295 <RAW>
A;Cross-references: GB:AP000004; NID:g3236131; PIDN:BAA29990.1; PID:g3257307
A;Experimental source: strain OT3
A;Note: this accession replaces an interim accession for a sequence replaced by GenBank
C;Genetics:
A;Gene: PH0896
C;Superfamily: zinc transporter Znt-2
Query Match 73.9%; Score 34; DB 2; Length 295;
Best Local Similarity 62.5%; Pred. No. 57;
Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
QY 1 CNEESLIC 8
||||| :|
Db 283 CKEKSMIC 290
RESULT 10
A40938
cytochrome P450 ib - rabbit
N;Contains: oxidoreductase (EC 1.-.-.-)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 16-Jun-2000
C;Accession: A40938
R;Kikuta, Y.; Sogawa, K.; Haniu, M.; Kinoshita, M.; Kusunose, E.; Nojima, Y.; Yamamoto, S.
J. Biol. Chem. 266, 17821-17825, 1991
A;Title: A novel species of cytochrome P-450 (P-450-ib) specific for the small intestine
A;Reference number: A40938; MUID:92011499; PMID:1717443
A;Accession: A40938
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-501 <KIK>
A;Cross-references: GB:D90405; NID:g217717; PIDN:BAA14401.1; PID:g217718
C;Genetics:
A;Gene: CYP2J1
C;Superfamily: human cytochrome P450 CYP2D6; cytochrome P450 homology
C;Keywords: chromoprotein; heme; iron; metalloprotein; oxidoreductase
F;308-469/Domain: cytochrome P450 homology <CYP>
F;447/Binding site: heme iron (Cys) (axial ligand) #status predicted
Query Match 73.9%; Score 34; DB 1; Length 501;
Best Local Similarity 85.7%; Pred. No. 89;
Matches 6; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
QY 2 NEESLIC 8
||||| :|
Db 297 NEENLIC 303
RESULT 11
T51421
L-aspartate oxidase-like protein - Arabidopsis thaliana
N;Alternate names: protein T9L3 60
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 18-Aug-2000 #sequence_revision 18-Aug-2000 #text_change 02-Sep-2000
C;Accession: T51421

R:Sato, S.; Nakamura, Y.; Kaneko, T.; Kato, T.; Asamizu, E.; Kotani, H.; Tabata, S.; Mew
 submitted to the Protein Sequence Database, August 2000
 A:Reference number: Z25394
 A:Accession: T51421
 A>Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-642 <SAT>
 A:Cross-references: EMBL:AL391149
 A:Experimental source: Cultivar Columbia; BAC clone T9L3
 C:Genetics:
 A:Map position: 5
 A:Insertions: 43/2; 158/3; 239/3; 258/3; 278/3; 299/2
 A:Note: T9L3_60
 C:Superfamily: fumarate reductase flavoprotein; 3-oxosteroid 1-dehydrogenase homology; 6
 Query Match 73.9%; Score 34; DB 2; Length 642;
 Best Local Similarity 50.0%; Pred. No. 1.1e+02;
 Matches 4; Conservative 4; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CNEESLIC 8
 ||:|:|:|
 Db 154 CDEETVVC 161

RESULT 12
 178879
 retinoblastoma binding protein 2 - human
 C:Species: Homo sapiens (man)
 C:Date: 17-Mar-2000 #sequence_revision 17-Mar-2000 #text_change 17-Mar-2000
 C:Accession: 178879; S16954
 R:Fattae, A.R.; Helin, K.; Dembski, M.S.; Dyson, N.; Harlow, E.; Vuocolo, G.A.; Hanobik
 Oncogene 8, 3149-3156, 1993
 A:Title: Characterization of the retinoblastoma binding proteins RBP1 and RBP2.
 A:Reference number: 158383; MUID:94020841; PMID:8414517
 A:Accession: 178879
 A>Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: mRNA
 A:Residues: 1-1722 <FAT>
 A:Cross-references: GB:S66431; NID:9435777; PIDN:AB28544.1; PID:9435778
 R:DeFeo-Jones, D.; Huang, P.S.; Jones, R.E.; Haskell, K.M.; Vuocolo, G.A.; Hanobik, M.G.
 Nature 352, 251-254, 1991
 A:Title: Cloning of cDNAs for cellular proteins that bind to the retinoblastoma gene pro
 A:Reference number: S16953; MUID:91312450; PMID:1857421
 A:Accession: S16954
 A>Status: not compared with conceptual translation
 A:Molecule type: mRNA
 A:Residues: 1102-1562, 'KKK' <DEF>
 C:Genetics:
 A:Gene: GDB:RBP2
 A:Cross-references: GDB:119548; OMIM:180280
 A:Map position: 3q21-3qter
 C:Superfamily: human retinoblastoma binding protein 2
 Query Match 73.9%; Score 34; DB 1; Length 1722;
 Best Local Similarity 62.5%; Pred. No. 2.6e+02;
 Matches 5; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 QY 1 CNEESLIC 8
 ||:|:|:|
 Db 692 CNPERLVC 699

RESULT 13
 B44881
 vascular endothelial growth factor-1 precursor - mouse
 C:Species: Mus musculus (house mouse)
 C:Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 05-Nov-1999
 C:Accession: B44881; A43351; A61029
 R:Brier, G.; Albrecht, U.; Sterrer, S.; Risau, W.
 Development 114, 521-532, 1992
 A:Title: Expression of vascular endothelial growth factor during embryonic angiogenesis
 A:Reference number: A44881; MUID:92274860; PMID:1592003
 A:Accession: B44881

A:Molecule type: mRNA
 A:Residues: 1-190 <BRE>
 A:Cross-references: GB:S38083; NID:9249858; PIDN:AAB22253.1; PID:g249859
 A:Experimental source: embryo
 A:Note: sequence extracted from NCBI backbone (NCBIN:107622, NCBIP:107623)
 R:Clafey, K.P.; Wilkison, W.O.; Spiegelman, B.M.
 J. Biol. Chem. 267, 16317-16322, 1992
 A:Title: Vascular endothelial growth factor. Regulation by cell differentiation and acti
 A:Reference number: A43351; MUID:92355593; PMID:1644816
 A:Accession: A43351
 A:Molecule type: mRNA
 A:Residues: 1-116, 'ER', 119-190 <CLA>
 A:Cross-references: GB:M95200; NID:9202350; PIDN:AAA40547.1; PID:g202351
 A:Note: sequence extracted from NCBI backbone (NCBIN:110665, NCBIP:110675)
 R:Rosenthal, R.A.; Megyesi, J.F.; Henzel, W.J.; Ferrara, N.; Folkman, J.
 Growth Factors 4, 53-59, 1990
 A:Title: Conditioned medium from mouse sarcoma 180 cells contains vascular endothelial g
 A:Reference number: A61029; MUID:91197543; PMID:2085441
 A:Accession: A61029
 A:Molecule type: protein
 A:Residues: 27-38 <ROS>
 C:Keywords: alternative splicing; angiogenesis; dimer; disulfide bond; glycoprotein; mit
 Query Match 71.7%; Score 33; DB 2; Length 190;
 Best Local Similarity 62.5%; Pred. No. 60;
 Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 QY 1 CNEESLIC 8
 ||:|:|:|
 Db 86 CNDEALEC 93

RESULT 14
 A35987
 glioma-derived vascular endothelial cell growth factor - rat
 C:Species: Rattus norvegicus (Norway rat)
 C:Date: 16-Nov-1990 #sequence_revision 16-Nov-1990 #text_change 05-Nov-1999
 C:Accession: A35987
 R:Conn, G.; Bayne, M.L.; Soderman, D.D.; Kwok, P.W.; Sullivan, K.A.; Palisi, T.M.; Hope
 Proc. Natl. Acad. Sci. U.S.A. 87, 2628-2632, 1990
 A:Title: Amino acid and cDNA sequences of a vascular endothelial cell mitogen that is h
 A:Reference number: A35987; MUID:90207249; PMID:2320579
 A:Accession: A35987
 A>Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-190 <CON>
 A:Cross-references: GB:M32167; NID:9204287; PIDN:AAA41211.1; PID:g204288
 Query Match 71.7%; Score 33; DB 2; Length 190;
 Best Local Similarity 62.5%; Pred. No. 60;
 Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 QY 1 CNEESLIC 8
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 Db 86 CNDEALEC 93

RESULT 15
 A44881
 vascular endothelial growth factor-3 precursor - mouse
 N:Contains: vascular endothelial growth factor-2; vascular permeability factor
 C:Species: Mus musculus (house mouse)
 C:Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 08-Oct-1999
 C:Accession: A44881; C44881; A60932; S52136
 R:Brier, G.; Albrecht, U.; Sterrer, S.; Risau, W.
 Development 114, 521-532, 1992
 A:Title: Expression of vascular endothelial growth factor during embryonic angiogenesis
 A:Reference number: A44881; MUID:92274860; PMID:1592003
 A:Accession: A44881
 A:Molecule type: mRNA
 A:Residues: 1-214 <BRE>
 A:Cross-references: GB:S37052; NID:9249856; PIDN:AAB22252.1; PID:g249857
 A:Experimental source: embryo

A;Note: sequence extracted from NCBI backbone (NCBIN:104677, NCBIP:104678)
A;Accession: C44861
A;Molecule type: mRNA
A;Residues: 1-140,209-214 <BR2>
A;Cross-references: GB:S38100; NID:q249860; PIDN:AB22254.1; PID:q249861
A;Note: sequence extracted from NCBI backbone (NCBIN:107624, NCBIP:107625)
R;Claus, M.; Gerlach, M.; Gerlach, H.; Brett, J.; Wang, F.; Familletti, P.C.; Pan, Y.C.
J. Exp. Med. 172, 1535-1545, 1990
A;Title: Vascular permeability factor: a tumor-derived polypeptide that induces endothelial
A;Reference number: A60932; MUID:91079755; PMID:2258694
A;Accession: A60932
A;Molecule type: protein
A;Residues: 27-33 <CLA>
R;Sugihara, T.; Kaul, S.C.; Mitsui, Y.; Wadhwa, R.
Biochim. Biophys. Acta 1224, 365-370, 1994
A;Title: Enhanced expression of multiple forms of VEGF is associated with spontaneous im
A;Reference number: S52136; MUID:95101726; PMID:7803491
A;Accession: S52136
A;Status: preliminary
A;Molecule type: protein
A;Residues: 27-46 <SUG>
C;Comment: Homodimers could be demonstrated for recombinant VEGF-2 but not VEGF-3.
C;Keywords: alternative splicing; angiogenesis; disulfide bond; glycoprotein; homodimer;
F;1-26/Domain: signal sequence #status predicted <SIG>
F;27-214/Product: vascular endothelial growth factor-3 #status experimental <MAT>
Query Match 71.7%; Score 33; DB 2; Length 214;
Best Local Similarity 62.5%; Pred. No. 66;
Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
QY 1 CNEESLIC 8
Db 86 CNDEALEC 93

Search completed: September 5, 2004, 10:01:16
Job time : 8.14141 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:38:39 ; Search time 3.63636 Seconds
(without alignments)
114.554 Million cell updates/sec

Title: US-09-761-636A-6
Perfect score: 46
Sequence: 1 CNEESLIC 8

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	46	100.0	354	1	VEGD_HUMAN
2	40	87.0	326	1	VEGD_RAT
3	36	78.3	133	1	VEGH_ORFN2
4	36	78.3	146	1	VEGA_SHEEP
5	36	78.3	164	1	VEGA_CAVPO
6	36	78.3	190	1	VEGA_BOVIN
7	36	78.3	358	1	VEGD_MOUSE
8	35	76.1	495	1	PASC_STRPU
9	35	76.1	4427	1	PKSL_BACSU
10	34.5	75.0	1778	1	NI89_SCHPO
11	34	73.9	500	1	CPJ1_RABIT
12	34	73.9	501	1	CPJ6_MOUSE
13	34	73.9	502	1	CPJ3_RAT
14	34	73.9	545	1	LG12_HUMAN
15	34	73.9	550	1	LG12_MOUSE
16	34	73.9	1722	1	RBB2_HUMAN
17	33	71.7	214	1	VEGA_MOUSE
18	33	71.7	214	1	VEGA_RAT
19	33	71.7	404	1	ARGJ_HELPH
20	33	71.7	508	1	CTP7_HORSE
21	33	71.7	551	1	RN27_HUMAN
22	33	71.7	551	1	RN27_MOUSE
23	33	71.7	1786	1	LMB1_HUMAN
24	32	69.6	138	1	PA26_TRIGA
25	32	69.6	190	1	VEGA_HORSE
26	32	69.6	190	1	VEGA_FIG
27	32	69.6	214	1	VEGA_CANFA
28	32	69.6	232	1	VEGA_HUMAN
29	32	69.6	376	1	DXR_THEMEA
30	32	69.6	399	1	DXR_CAUCR
31	32	69.6	429	1	MDHP_SORBI
32	32	69.6	432	1	MDHP_MAIZE
33	32	69.6	432	1	MDHQ_SORBI

RESULT 1
VEGD_HUMAN
ID VEGD_HUMAN STANDARD; PRT; 354 AA.
AC O43915;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF).
GN FIGF OR VEGFD.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Lung;
RX MEDLINE=97349118; PubMed=9205122;
RA Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
RT "Molecular cloning of a novel vascular endothelial growth factor, VEGF-D";
RL Genomics 42:483-488(1997).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Lung;
RX MEDLINE=98140120; PubMed=9479493;
RA Rocchigiani M., Lestingi M., Luddi A., Orlandini M., Franco B., Rossi E., Ballabio A., Zuffardi O., Oliviero S.;
RT "Human FIGF: cloning, gene structure, and mapping to chromosome Xp22.1 between the FIGA and the GRPR genes";
RL Genomics 47:207-216(1998).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=98118549; PubMed=9435229;
RA Achen M.G., Jeltsch M., Kukk E., Maekinen T., Vitali A., Wilks A.F., Alitalo K., Stacker S.A.;
RT "Vascular endothelial growth factor D (VEGF-D) is a ligand for the tyrosine kinases VEGF receptor 2 (Flk1) and VEGF receptor 3 (Flt4).";
RL Proc. Natl. Acad. Sci. U.S.A. 95:548-553(1998).
RN [4]
RP SEQUENCE FROM N.A.
RC TISSUE=Lung;
RX MEDLINE=22388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Sherman C.M., Schuler G.D., Altshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Udén T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

34 32 69.6 435 1 MDHP_SPIOL P52426 spinacia ol
35 32 69.6 437 1 MDHP_MEDSA O48902 medicago sa
36 32 69.6 441 1 MDHP_MESCR Q05145 mesembryant
37 32 69.6 441 1 MDHP_PEA P21528 pisum sativ
38 32 69.6 453 1 MDHP_FLABI P46489 flaveria bi
39 31 67.4 51 1 YDAF_ECOLI P38395 escherichia
40 31 67.4 82 1 VG13_HSV1 Q00166 ictaluriid h
41 31 67.4 171 1 NIDM_HUMAN O96000 homo sapien
42 31 67.4 218 1 PURQ_METTH O26270 methanobact
43 31 67.4 231 1 TRMD_MYCGE P47683 mycoplasma
44 31 67.4 251 1 Y206_CHLPN Q928x8 chlamydia p
45 31 67.4 291 1 ISPE_CHLCV Q821X0 chlamydophi

ALIGNMENTS

RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.; RT "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences"; RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002). (5)

RN PROCESSING, AND SEQUENCE OF 89-94; 100-105 AND 206-213. RX MEDLINE=20011413; PubMed=10542248; RA Stacke S.A., Stenvers K.L., Caesar C., Vitali A., Domagala T., RA Nice E.C., Roufail S., Simpson R.J., Moritz R., Karpanen T., RA Alitalo K., Achen M.G.; RT "Biosynthesis of vascular endothelial growth factor-D involves proteolytic processing which generates non-covalent homodimers."; RL J. Biol. Chem. 274:32127-32136(1999).

CC -!- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (Flk1) and VEGFR-3 (Flt4) receptors.

CC -!- SUBUNIT: Homodimer; non-covalent and antiparallel.

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- TISSUE SPECIFICITY: Highly expressed in lung, heart, small intestine and fetal lung, and at lower levels in skeletal muscle, colon, and pancreas.

CC -!- PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions.

CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.

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DR EMBL; D89630; BAA24264.1; -

DR EMBL; Y12863; CAA73370.1; -

DR EMBL; Y12864; CAA73371.1; -

DR EMBL; Y12865; CAA73371.1; JOINED.

DR EMBL; Y12866; CAA73371.1; JOINED.

DR EMBL; Y12867; CAA73371.1; JOINED.

DR EMBL; Y12868; CAA73371.1; JOINED.

DR EMBL; Y12869; CAA73371.1; JOINED.

DR EMBL; Y12870; CAA73371.1; JOINED.

DR EMBL; BC027948; AAB27948.1; -

DR HSPF; P15692; IVPF.

DR Genew; HGNC:3708; FIGF.

DR MIM; 300091; -

DR GO; GO:0005615; C:extracellular space; TAS.

DR GO; GO:0005161; F:platelet-derived growth factor receptor bin. .; TAS.

DR GO; GO:0005102; F:receptor binding; TAS.

DR GO; GO:0008284; F:positive regulation of cell proliferation; TAS.

DR InterPro; IPR004153; CXCC repeat.

DR InterPro; IPR000072; PD growth_factor.

DR Pfam; PF03128; CXCC; 3.

DR Pfam; PF00341; PDGF; 1.

DR ProDom; PD001629; PD growth_factor; 1.

DR SMART; SM00141; PDGF; 1.

DR PROSITE; PS00249; PDGF_1; 1.

DR PROSITE; PS0278; PDGF_2; 1.

KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat; Cleavage on pair of basic residues; Multigene family.

FT SIGNAL 1 21 POTENTIAL.

OR 99 (IN A MINOR FORM).
VASCULAR ENDOTHELIAL GROWTH FACTOR D.
4 X 16 AA REPEATS OF C-X(10)-C-X-C-X(1,3)-C.
1 (APPROXIMATE).

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DR HSP: P15692; 1VPP.
DR InterPro; IPR004153; CXKC repeat.
DR InterPro; IPR000072; PD growth_factor.
DR Pfam; PF00341; CXKC; 1.
DR PRINTS; PD001629; PD growth_factor; 1.
DR ProDom; PD001629; PD growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
KW Cleavage on pair of basic residues; Multigene family.
FT SIGNAL 1 21 POTENTIAL.
FT PROPEP 22 93 POTENTIAL.
FT CHAIN 94 210 VASCULAR ENDOTHELIAL GROWTH FACTOR D.
FT PROPEP 211 326 POTENTIAL.
FT DOMAIN 227 317 X(1,3)-C.
FT REPEAT 227 242 1 (APPROXIMATE).
FT REPEAT 263 278 2.
FT REPEAT 282 298 3.
FT REPEAT 306 317 4 (INCOMPLETE).
FT DISULFID 116 158 BY SIMILARITY.
FT DISULFID 147 194 BY SIMILARITY.
FT DISULFID 151 196 BY SIMILARITY.
FT DISULFID 141 141 INTERCHAIN (BY SIMILARITY).
FT DISULFID 150 150 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 160 160 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 190 190 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 292 292 N-LINKED (GLCNAC. . .) (POTENTIAL).
SQ SEQUENCE 326 AA; 37112 MW; 1261AFA373596C00 CRC64;

Query Match
Best Local Similarity 87.0%; Score 40; DB 1; Length 326;
Matches 6; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
DB 151 CNEESVMC 158

RESULT 3
VEGH ORFN2 STANDARD; PRT; 133 AA.
AC P52584;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor precursor.
GN A2R.
OS Orf virus (strain NZ2) (OV NZ-2).
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=10259;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=94076465; PubMed=8254780;
RA Lytle D.J., Fraser K.M., Fleming S.B., Mercer A.A., Robinson A.J.;
RT "Homologs of vascular endothelial growth factor are encoded by the
RT poxvirus orf virus."
RL J. Virol. 68:84-92(1994).
CC -!- FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.
CC -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
CC
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CC
CC EMBL; S67520; AAB29220.2; -.

DR HSP: P15692; 1VPP.
DR InterPro; IPR002400; GF cysknot.
DR InterPro; IPR000072; PD growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PD00438; GFCYSKNOT.
DR ProDom; PD001629; PD growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
KW Mitogen; Growth factor; Glycoprotein; Signal.
FT SIGNAL 1 20 POTENTIAL.
FT CHAIN 21 133 VASCULAR ENDOTHELIAL GROWTH FACTOR
FT DISULFID 36 78 HOMOLOG.
FT DISULFID 67 112 BY SIMILARITY.
FT DISULFID 71 114 BY SIMILARITY.
FT DISULFID 61 61 INTERCHAIN (BY SIMILARITY).
FT DISULFID 70 70 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 85 85 N-LINKED (GLCNAC. . .) (POTENTIAL).
SQ SEQUENCE 133 AA; 14715 MW; 917C0F683030C39 CRC64;

Query Match
Best Local Similarity 78.3%; Score 36; DB 1; Length 133;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
DB 71 CNEESLEC 78

RESULT 4
VEGA SHEEP STANDARD; PRT; 146 AA.
AC P50412;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
DE permeability factor) (VPF).
GN VEGF OR VEGFA.
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Kidney.
RX MEDLINE=97117958; PubMed=8958842;
RA Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,
RA Reynolds L.P., Moor R.M.;
RT "Characterization and expression of vascular endothelial growth
RT factor (VEGF) in the ovine corpus luteum."
RL J. Reprod. Fertil. 108:157-165(1996).
CC -!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and
CC endothelial cell growth. It induces endothelial cell
CC proliferation, promotes cell migration, inhibits apoptosis, and
CC induces permeabilization of blood vessels. It binds to the
CC VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
CC heparin (By similarity).
CC -!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
CC with PLGF (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
CC
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CC or send an email to license@isb-sib.ch).
CC
CC EMBL; X89506; CAA61677.1; -.

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DR PIR; S57956; S57956.
DR HSP; P15692; 1VPP.
DR InterPro; IPR002400; GF_CysKnot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
DR Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
KW Heparin-binding; Multigene family.
FT CHAIN 1 26 BY SIMILARITY.
FT CHAIN 27 146 VASCULAR ENDOTHELIAL GROWTH FACTOR A.
FT DISULFID 51 93 BY SIMILARITY.
FT DISULFID 82 127 BY SIMILARITY.
FT DISULFID 86 129 BY SIMILARITY.
FT DISULFID 76 76 INTERCHAIN (BY SIMILARITY).
FT DISULFID 85 85 INTERCHAIN (BY SIMILARITY).
FT DISULFID 100 100 N-LINKED (GLCNAC... ) (POTENTIAL).
FT CARBOHYD 146 AA; 17247 MW; 4E792CB557F91760 CRC64;
SQ SEQUENCE 146 AA; 17247 MW; 4E792CB557F91760 CRC64;

Query Match 78.3%; Score 36; DB 1; Length 146;
Best Local Similarity 75.0%; Pred. No. 3.1;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
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Db 86 CNDESLEC 93

RESULT 5
VEGA_CAVPO STANDARD; PRT; 164 AA.
AC P26617; 1992 (Rel. 23, Created)
DT 01-AUG-1992 (Rel. 23, Last sequence update)
DT 01-AUG-1992 (Rel. 23, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor A (VEGF-A) (Vascular permeability factor) (VPF).
DE factor) (VPF).
GN VEGF OR VEGFA.
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OC NCBI_TaxID=10141;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Bile duct;
RA Berse B.;
RL Submitted (JAN-1992) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Growth factor active in angiogenesis, and endothelial cell growth. Induces endothelial proliferation and vascular permeability (By similarity).
CC -!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer with p1GF (By similarity).
CC -!- SUBCELLULAR LOCATION: Secreted but remains associated to cells or to the extracellular matrix unless released by heparin (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
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CC -----
CC EMBL; M84230; AAA37057.1; -
CC HSP; P15692; 1VGH.
DR InterPro; IPR002400; GF_CysKnot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.

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DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
DR Mitogen; Angiogenesis; Growth factor; Glycoprotein.
KW Mitogen; Angiogenesis; Growth factor; Glycoprotein.
FT DISULFID 25 67 BY SIMILARITY.
FT DISULFID 56 101 BY SIMILARITY.
FT DISULFID 60 103 BY SIMILARITY.
FT DISULFID 50 50 INTERCHAIN (BY SIMILARITY).
FT DISULFID 59 59 INTERCHAIN (BY SIMILARITY).
FT DISULFID 74 74 N-LINKED (GLCNAC... ) (POTENTIAL).
FT CARBOHYD 164 AA; 19330 MW; 9EB86A81A9D5DCA4 CRC64;
SQ SEQUENCE 164 AA; 19330 MW; 9EB86A81A9D5DCA4 CRC64;

Query Match 78.3%; Score 36; DB 1; Length 164;
Best Local Similarity 75.0%; Pred. No. 3.6;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
||:|||||
Db 60 CNDESLEC 67

RESULT 6
VEGA_BOVIN STANDARD; PRT; 190 AA.
AC P15631;
DT 01-APR-1990 (Rel. 14, Created)
DT 01-APR-1990 (Rel. 14, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular permeability factor) (VPF).
DE permeability factor) (VPF).
GN VEGF OR VEGFA.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OC NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A. AND SEQUENCE OF 27-47.
RX MEDLINE=90069608; PubMed=2479986;
RA Leung D.W., Cachianes G., Kuang W.-J., Goeddel D.V., Ferrara N.;
RT "Vascular endothelial growth factor is a secreted angiogenic mitogen.";
RL Science 246:1306-1309(1989).
RN [2]
RP SEQUENCE OF 27-190 FROM N.A. (ISOFORMS ALPHA AND BETA).
RX MEDLINE=90121225; PubMed=2610687;
RA Tischer E., Gospodarowicz D., Mitchell R., Silva M., Schilling J., Lau K., Crisp T., Fiddes J.C., Abraham J.A.;
RT "Vascular endothelial growth factor: a new member of the platelet-derived growth factor gene family.";
RL Biochem. Biophys. Res. Commun. 165:1198-1206(1989).
RN [3]
RP SEQUENCE OF 27-31.
RX MEDLINE=89286596; PubMed=2735925;
RA Ferrara N., Henzel W.J.;
RT "Pituitary follicular cells secrete a novel heparin-binding growth factor specific for vascular endothelial cells.";
RL Biochem. Biophys. Res. Commun. 161:851-858(1989).
CC -!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and heparin (By similarity).
CC -!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer with p1GF (By similarity).
CC -!- SUBCELLULAR LOCATION: Secreted but remains associated to cells or to the extracellular matrix unless released by heparin (By similarity).
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;

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CC Name=Alpha;
CC IsoId=b15691-1; Sequence=Displayed;
CC Name=Beta;
CC IsoId=b15691-2; Sequence=VSP 004613, VSP 004614;
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
CC -----
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CC -----
DR EMBL; M32976; AAA30502.1; -
DR EMBL; M31836; AAA30804.1; -
DR EMBL; M33750; AAA30805.1; -
DR PIR; A33787; A33787.
DR PIR; B40080; B40080.
DR HSP; P15692; 1VGH.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF_1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
KW Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
KW Heparin-binding; Alternative splicing; Multigene family.
FT SIGNAL 1 26
FT CHAIN 27 190 VASCULAR ENDOTHELIAL GROWTH FACTOR A.
FT DISULFID 51 93 BY SIMILARITY.
FT DISULFID 82 127 BY SIMILARITY.
FT DISULFID 86 129 BY SIMILARITY.
FT DISULFID 76 76 INTERCHAIN (BY SIMILARITY).
FT DISULFID 85 85 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 100 100 N-LINKED (GLCNAC. .) (POTENTIAL).
FT VARSPPLIC 139 183 /FTId=VSP 004613.
FT VARSPPLIC 184 184 R -> K (in isoform Beta).
FT SEQUENCE 190 AA; 22310 MW; EDBF903E46E24789 CRC64;
Query Match 78.3%; Score 36; DB 1; Length 190;
Best Local Similarity 75.0%; Pred. No. 4.1;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
QY 1 CNEESLIC 8
Db 86 CNDESLEC 93
RESULT 7
VEGD_MOUSE
ID VEGD_MOUSE STANDARD; PRT; 358 AA.
AC P97946;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor D precursor (VEGFD-D) (c-fos induced
DE growth factor) (FIGF).
GN FIGF OR VEGFD.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=C57BL/6J; TISSUE=Fibroblast;
RX MEDLINE=97030254; PubMed=8876195;
RA Orlandini M., Marconcin L., Ferruzzi R., Oliviero S.;
RT "Identification of a c-fos-induced gene that is related to the

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RT platelet-derived growth factor/vascular endothelial growth factor
RT family.";
RN Proc. Natl. Acad. Sci. U.S.A. 93:11675-11680(1996).
RP (2)
RP SEQUENCE FROM N.A.
RP TISSUE=Lung;
RX MEDLINE=97349118; PubMed=9205122;
RA Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
RT "Molecular cloning of a novel vascular endothelial growth factor,
RT VEGF-D.";
RL Genomics 42:483-488(1997).
RN [3]
RP DEVELOPMENTAL STAGE.
RX MEDLINE=98288130; PubMed=9622638;
RA Avantaggiato V., Orlandini M., Acampora D., Oliviero S., Simeone A.;
RT "Embryonic expression pattern of the murine figf gene, a growth factor
RT belonging to platelet-derived growth factor/vascular endothelial
RL Mech. Dev. 73:221-224(1998).
RN [4]
RP RECEPTOR SPECIFICITY.
RX MEDLINE=21276411; PubMed=11279005;
RA Baldwin M.E., Catimel B., Nice B.C., Roufail S., Hall N.E.,
RA Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;
RT "The specificity of receptor binding by vascular endothelial growth
RT factor-d is different in mouse and man.";
RL J. Biol. Chem. 276:19166-19171(2001).
CC -!- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis
CC and endothelial cell growth, stimulating their proliferation and
CC migration and also has effects on the permeability of blood
CC vessels. May function in the formation of the venous and lymphatic
CC vascular systems during embryogenesis, and also in the maintenance
CC of differentiated lymphatic endothelium in adults. Binds and
CC activates VEGFR-3 (Flt4) receptor.
CC -!- SUBUNIT: Homodimer; non-covalent and antiparallel.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- TISSUE SPECIFICITY: Highly expressed in fetal and adult lung.
CC -!- DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in several
CC body structures and organs of the embryo such as limb buds,
CC acoustic ganglion, teeth, heart, anterior pituitary as well as
CC lung and kidney mesenchyme, liver, derma, and peritoneum of the
CC vertebral column.
CC -!- INDUCTION: By the transcription factor c-fos.
CC -!- PTM: Undergoes a complex proteolytic maturation which generates a
CC variety of processed secreted forms with increased activity toward
CC VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer
CC linked by disulfide bonds before secretion. The fully processed
CC VEGF-D is composed mostly of two VEGF homology domains (VHDS)
CC bound by non-covalent interactions (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
CC -----
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CC -----
DR EMBL; X95572; CAA67892.1; -
DR EMBL; D89228; BAA14002.1; -
DR HSP; P15692; 1VPP.
DR PMMA-2DPAGE; P97946; -
DR MGI; MGI:108037; Figf.
DR GO; GO:0005576; C:extracellular; IDA.
DR GO; GO:0008083; F:growth factor activity; IDA.
DR GO; GO:0005515; F:protein binding; IPI.
DR GO; GO:0008283; P:cell proliferation; IDA.
DR InterPro; IPR004153; CXCXC repeat.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXCXC; 2.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.

```

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DR EMBL; L12047; AAC37183.1; -
 DR InterPro; IPR008999; Actin_crosslink.
 KW Actin-binding.
 FT INIT MET 0
 SQ SEQUENCE 495 AA; 54813 MW; D3B0B5CC52C21593 CRC64;

Query Match 76.1%; Score 35; DB 1; Length 495;
 Best Local Similarity 75.0%; Pred. NO. 18;
 Matches 6; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
 DB 108 CNEESLIC 115

RESULT 9

PKSL_BACSU STANDARD; PRT; 4427 AA.
 ID PKSL_BACSU
 AC Q05470;
 DT 01-FEB-1995 (Rel. 31, Last sequence update)
 DT 01-FEB-1995 (Rel. 31, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Putative polyketide synthase pksL (PKS).
 GN PKSL OR PKSX OR PKSA OR OUTG OR BSU17190.
 OS Bacillus subtilis.
 OC Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
 OX NCBI_TaxID=1423;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=168 / PBI424;
 RX MEDLINE=93345824; PubMed=8344529;
 RA Scotti C., Piatti M., Cuzzoni A., Perani P., Tognoni A., Grandi G.,
 RA Galizzi A., Albertini A.M.;
 RT "A Bacillus subtilis large ORF coding for a polypeptide highly
 RT similar to polyketide synthases.";
 RL Gene 130:65-71(1993).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=168;
 RX MEDLINE=98044033; PubMed=9384377;
 RA Kunst F., Ogasawara N., Moszer I., Albertini A.M., Alloni G.,
 RA Azevedo V., Bertero M.G., Bessieres P., Bolotin A., Borchert S.,
 RA Borriss R., Boursier L., Brans A., Braun M., Brignell S.C., Bron S.,
 RA Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M.,
 RA Choi S.K., Codani J.J., Connerion I.F., Cummings N.J., Daniel R.A.,
 RA Denizot F., Devine K.M., Dusterhoft A., Ehrlich S.D., Emerson P.T.,
 RA Entian K.D., Errington J., Fabret C., Ferrari E., Foulger D.,
 RA Fritz C., Fujita M., Fujita Y., Fuma S., Galizzi A., Galleron N.,
 RA Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G.,
 RA Guiseppi G., Guy B.J., Haga K., Haiech J., Harwood C.R., Henaut A.,
 RA Hilbert H., Holsappel S., Hosono S., Hull M.F., Itaya M., Jones L.,
 RA Joris B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C.,
 RA Kobayashi Y., Koetter P., Koningstein G., Krogh S., Kumano M.,
 RA Kurita K., Lapidus A., Iardinois S., Lauber J., Lazarevic V.,
 RA Lee S.M., Levine A., Liu H., Masuda S., Mauel C., Medigue C.,
 RA Medina N., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback M.,
 RA Noone D., O'Reilly M., Ogawa K., Ogiwara A., Oudega B., Park S.H.,
 RA Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M.,
 RA Priebe M., Rivolta C., Rocha E., Roche B., Rose M., Sadate Y.,
 RA Rieger M., Pucic P., Purnelle D., Rapoport G., Rey M., Reynolds S.,
 RA Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F.,
 RA Sekiguchi J., Sekowska A., Seror S.J., Serron P., Shin B.S., Soldo B.,
 RA Sorokin A., Tacconi E., Takagi T., Takahashi H., Takenaru K.,
 RA Takeuchi M., Tamakoshi A., Tanaka T., Terpstra P., Tognoni A.,
 RA Tosato V., Uchiyama S., Vandenbol M., Vannier F., Vassarotti A.,
 RA Viari A., Wambutt R., Wedler E., Wedler H., Weitzenecker T.,
 RA Winters P., Wipat A., Yamamoto H., Yamane K., Yasumoto K., Yata K.,

DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS00278; PDGF_2; 1.
 KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
 KW Cleavage on pair of basic residues; Multigene family.
 FT SIGNAL 1 21
 FT PROPEP 22 93
 FT CHAIN 94 210
 FT PROPEP 211 358
 FT DOMAIN 227 323
 FT REPEAT 227 242
 FT REPEAT 263 278
 FT REPEAT 282 298
 FT REPEAT 306 323
 FT DISULFID 116 158
 FT DISULFID 147 194
 FT DISULFID 151 196
 FT DISULFID 141 141
 FT DISULFID 150 150
 FT CARBOHYD 160 160
 FT CARBOHYD 190 190
 FT CARBOHYD 292 292
 SQ SEQUENCE 358 AA; 40908 MW; 6636B17BFB07037C CRC64;

Query Match 78.3%; Score 36; DB 1; Length 358;
 Best Local Similarity 62.3%; Pred. NO. 8;
 Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
 DB 151 CNEEGVMC 158

RESULT 8

FASC_STRPU STANDARD; PRT; 495 AA.
 ID FASC_STRPU
 AC Q05634;
 DT 01-NOV-1997 (Rel. 35, Created)
 DT 30-MAY-2000 (Rel. 39, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE Fascin.
 OS Strongylocentrotus purpuratus (Purple sea urchin).
 OC Eukaryota; Echinodermata; Eleutherozoa; Echinozoa;
 OC Echinoidea; Echinozoidea; Echinacea; Echinoidea; Strongylocentrotidae;
 OC Strongylocentrotus.
 OX NCBI_TaxID=7668;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=94022326; PubMed=8415664;
 RA Bryan J., Edwards R.H., Matsuda P., Otto J., Wulfschlegel J.; the
 RA "Fascin, an echinoid actin-bundling protein, is a homolog of the
 RA Drosophila singed gene product.";
 RL Proc. Natl. Acad. Sci. U.S.A. 90:9115-9119(1993).
 RN [2]
 RP CHARACTERIZATION.
 RX MEDLINE=79091184; PubMed=731692;
 RA Bryan J., Kane R.E.;
 RA "Separation and interaction of the major components of sea urchin
 RA actin gel.";
 RL J. Mol. Biol. 125:207-224(1978).
 RN [3]
 RP CHARACTERIZATION.
 RX MEDLINE=77051438; PubMed=1033188;
 RA Kane R.E.;
 RA "Actin polymerization and interaction with other proteins in
 RA temperature-induced gelation of sea urchin egg extracts.";
 RL J. Cell Biol. 71:704-714(1976).
 CC -!- FUNCTION: ACTS AS AN ACTIN BUNDLING PROTEIN.
 CC -!- SIMILARITY: Belongs to the fascin family.
 CC -----
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RESULT 13
CPJ3 RAT

Search completed: September 5, 2004, 09:56:02
Job time : 4.63636 secs

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REPEAT      451      494      EAR 5.
CARBOHYD    70      70      N-LINKED (GLCNAC. . .) (POTENTIAL) .
CARBOHYD   186      186      N-LINKED (GLCNAC. . .) (POTENTIAL) .
CARBOHYD   271      271      N-LINKED (GLCNAC. . .) (POTENTIAL) .
CARBOHYD   402      402      N-LINKED (GLCNAC. . .) (POTENTIAL) .
CONFLICT    524      524      F -> L (IN REF. 2 AND 4) .
SEQUENCE    545 AA; 62298 MW; PD29B51F01B3D7E2 CRC64;

Query Match      73.9%; Score 34; DB 1; Length 545;
Best Local Similarity 62.5%; Pred. No. 31;
Matches      5; Conservative      2; Mismatches      1; Indels      0; Gaps      0;

QY      1 CNEESLIC 8
      | . | | | |
      42 CTKESILC 49

Ddb

RESULT 15
LG12 MOUSE
IID LG12 MOUSE STANDARD; PRT; 550 AA.
AC Q8K4Z0; Q8OT76;
DT 10-OCT-2003 (Rel. 42, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Leucine-rich repeat LGI family member 2 precursor (Leucine-rich
DE gliona-inactivated protein 2) .
DE LG12 OR KIAA1916.
OS Mus musculus (Mouse) .
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]__
SEQUENCE FROM N.A. (ISOFORM 1) .
RP
RC MEDLINE=C57BL/6J;
RX MEDLINE=2207944; PubMed=12217514;
RA Staub E., Perez-Tur J., Siebert R., Nobile C., Moschonas N.K.,
RA Deloukas P., Hinzmann B.;
RT "The novel EPTP repeat defines a superfamily of proteins implicated in
RT epileptic disorders."
RL Trends Biochem. Sci. 27:441-444(2002) .
RN [2]
SEQUENCE FROM N.A. (ISOFORM 1) .
RP
RC TISSUE=Brain;
RX MEDLINE=22579291; PubMed=12693553;
RA Okazaki N., Kikuno R., Ohara R., Inamoto S., Aizawa H., Yuasa S.,
RA Nakajima D., Nagase T., Ohara G., Koga H.;
RT "Prediction of the coding sequences of mouse homologues of KIAA gene:
RT II. The complete nucleotide sequences of 400 mouse KIAA-homologous
RT cDNAs identified by screening of terminal sequences of cDNA clones
RT randomly sampled from size-fractionated libraries.";
RT DNA Res 10:35-48(2003) .
RL -1- SUBCELLULAR LOCATION: Secreted (Potential) .
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=Q8K4Z0-1; Sequence=Displayed;
CC Name=2;
CC IsoId=Q8K4Z0-2; Sequence=VSP_007680, VSP_007681;
CC -1- SIMILARITY: Contains 5 EAR repeats.
CC -1- SIMILARITY: Contains 4 leucine-rich (LRR) repeats.
-----
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CC EMBL; AJ487515; CAD31783.1; --
DR EMBL; AK122570; BAC6582.1; ALT_INIT.
DR MGD; MGI:2180196; Ig12.
DR InterPro; IPR09039; EAR.

```

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:46:09 ; Search time 18.101 Seconds
(without alignments)
139.448 Million cell updates/sec

Title: US-09-761-636A-6

Perfect score: 46

Sequence: 1 CNEESLIC 8

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

- 1: SPREMBL.25.*
- 2: sp_archaea.*
- 3: sp_bacteria.*
- 4: sp_fungi.*
- 5: sp_human.*
- 6: sp_invertebrate.*
- 7: sp_mammal.*
- 8: sp_mhc.*
- 9: sp_organelle.*
- 10: sp_plant.*
- 11: sp_rodent.*
- 12: sp_virus.*
- 13: sp_vertebrate.*
- 14: sp_unclassified.*
- 15: sp_rvirus.*
- 16: sp_bacteriap.*
- 17: sp_archaeap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	40	87.0	252	13 Q8QGD7	Q8QGD7 gallus gall
2	40	87.0	326	11 Q912E4	Q912E4 rattus norv
3	37	80.4	152	12 Q8B571	Q8B571 pseudocowpo
4	37	80.4	200	16 Q81XN1	Q81XN1 bacillus an
5	36	78.3	65	6 Q8MIN0	Q8MIN0 capra hircu
6	36	78.3	68	6 Q97500	Q97500 oryctolagus
7	36	78.3	75	6 Q18843	Q18843 oryctolagus
8	36	78.3	78	6 Q9N1S2	Q9N1S2 capreolus c
9	36	78.3	109	6 Q8MIN1	Q8MIN1 capra hircu
10	36	78.3	118	6 Q9MZB1	Q9MZB1 ovis aries
11	36	78.3	120	6 Q866G4	Q866G4 oryctolagus
12	36	78.3	123	6 Q9N1S1	Q9N1S1 capreolus c
13	36	78.3	131	6 Q8MJ86	Q8MJ86 capreolus c
14	36	78.3	132	12 Q9YMF3	Q9YMF3 orf virus.
15	36	78.3	136	12 Q8QGE8	Q8QGE8 orf virus.
16	36	78.3	148	13 Q42571	Q42571 xenopus lae

17	36	78.3	190	6	077643	O77643 ovis aries
18	36	78.3	194	13	042572	O42572 xenopus lae
19	36	78.3	267	2	Q8VU11	Q8VU11 bacteroides
20	36	78.3	421	5	Q95T10	Q95T10 drosophila
21	36	78.3	502	5	Q9VFF4	Q9VFF4 drosophila
22	36	78.3	864	4	Q81Z23	Q81Z23 homo sapien
23	36	78.3	1115	5	Q27764	Q27764 plasmodium
24	36	78.3	1778	4	Q96J14	Q96J14 plasmodium
25	35	76.1	83	16	Q81RL5	Q81RL5 homo sapien
26	35	76.1	227	16	Q891A7	Q891A7 clostridium
27	35	76.1	435	4	Q8NSU8	Q8NSU8 homo sapien
28	35	76.1	837	13	Q7T1T7	Q7T1T7 fugu rubrip
29	35	76.1	1062	13	Q7ZUM7	Q7ZUM7 brachydanio
30	34	73.9	148	11	Q8K1C5	Q8K1C5 mus musculus
31	34	73.9	241	2	Q93FQ7	Q93FQ7 cowdria rum
32	34	73.9	295	17	Q58637	Q58637 pyrococcus
33	34	73.9	317	5	Q9W1E4	Q9W1E4 drosophila
34	34	73.9	365	12	Q8B590	Q8B590 chorisstoneu
35	34	73.9	374	11	Q91W71	Q91W71 mus musculus
36	34	73.9	435	5	Q9VSV3	Q9VSV3 drosophila
37	34	73.9	435	5	Q8MSL3	Q8MSL3 drosophila
38	34	73.9	501	11	Q9QXF7	Q9QXF7 rattus norv
39	34	73.9	501	11	Q8BR78	Q8BR78 mus musculus
40	34	73.9	502	11	Q924D1	Q924D1 mus musculus
41	34	73.9	529	11	Q9CRQ9	Q9CRQ9 mus musculus
42	34	73.9	642	10	Q9LER1	Q9LER1 arabidopsis
43	34	73.9	838	5	Q9VQA9	Q9VQA9 drosophila
44	34	73.9	1102	4	Q86XZ1	Q86XZ1 homo sapien
45	34	73.9	1712	5	Q81CW9	Q81CW9 plasmodium

ALIGNMENTS

RESULT 1
Q8QGD7 PRELIMINARY; PRT; 252 AA.

AC Q8QGD7
DT 01-JUN-2002 (TREMBLrel. 21, Created)
DT 01-JUN-2002 (TREMBLrel. 21, Last sequence update)
DE Vascular endothelial growth factor D.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RA Diaz-Trelles R., Rodriguez-Leon J., Kawakami Y.,
RA Izpisua-Belmonte J.C.;
RT "Expression of the chick vascular endothelial growth factor D gene
RL Mech. Dev. 0:0-0(2002).
DR EMBL; AF479650; AAM12733.1; --
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 252 AA; 28767 MW; 643475DAB2E72F27 CRC64;

Query Match 87.0%; Score 40; DB 13; Length 252;
Best Local Similarity 87.5%; Pred. No. 1.8;
Matches 7; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8

Db 146 CNEESLSC 153

DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS0278; PDGF-2; 1.
 SQ SEQUENCE 152 AA; 16302 MW; F4B3956D60B37A3D CRC64;

Query Match 80.4%; Score 37; DB 12; Length 152;
 Best Local Similarity 75.0%; Pred. No. 4.9;
 Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
 ||:||||
 Db 89 CNDESOIC 96

RESULT 4

Q81XN1 PRELIMINARY; PRT; 200 AA.
 ID Q81XN1
 AC Q81XN1;
 DT 01-JUN-2003 (TrEMBLrel. 24, Created)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Hypothetical protein.
 GN BA5202.
 OS Bacillus anthracis (strain Ames).
 OC Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
 OX NCBI_TaxID=198094;
 RN [1]_TaxID=198094;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=22608414; PubMed=12721629;
 RA Read T.D., Peterson S.N., Tourasse N., Baillie L.W., Paulsen I.T.,
 RA Nelson K.E., Tettelin H., Fouts D.E., Eisen J.A., Gill S.R.,
 RA Holtzapple E.K., Okstad O.A., Helgason E., Ristone J., Wu M.,
 RA Kolonay J.F., Beanan M.J., Dodson R.J., Brinkac L.M., Gwinn M.,
 RA DeBoy R.T., Madupu R., Daugherty S.C., Durkin A.S., Haft D.H.,
 RA Nelson W.C., Peterson J.D., Pop M., Khouri H.M., Radune D.,
 RA Benton J.L., Mahamoud Y., Jiang L., Hance I.R., Weidman J.P.,
 RA Berry K.J., Plaut R.D., Wolf A.M., Watkins K.B., Nierman W.C.,
 RA Hazen A., Cline R., Redmond C., Thwaite J.E., White O., Salzberg S.L.,
 RA Thomson B., Friedlander A.M., Koehler T.M., Hanna P.C., Kolsto A.-B.,
 RA Fraser C.M.;
 RT "The genome sequence of Bacillus anthracis Ames and comparison to
 RT closely related bacteria."
 RL Nature 423:81-86(2003).
 DR EMBL; AE017040; AAP28871.1; -.
 DR TIGR; BA5202; -.
 KW Hypothetical protein; Complete proteome.
 SQ SEQUENCE 200 AA; 23905 MW; 70E8DD90E5DBA7A0 CRC64;

Query Match 80.4%; Score 37; DB 16; Length 200;
 Best Local Similarity 62.5%; Pred. No. 6.3;
 Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
 ||:||||
 Db 52 CNDEKMIC 59

RESULT 5

Q8MINO PRELIMINARY; PRT; 65 AA.
 ID Q8MINO
 AC Q8MINO;
 DT 01-OCT-2002 (TrEMBLrel. 22, Created)
 DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Vascular endothelial growth factor 121 (Fragment).
 OS Capra hircus (Goat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Caprinae; Capra.
 OX NCBI_TaxID=9925;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Corpus luteum;

RESULT 2

Q91ZE4 PRELIMINARY; PRT; 326 AA.
 ID Q91ZE4
 AC Q91ZE4;
 DT 01-DEC-2001 (TrEMBLrel. 19, Created)
 DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE VEGF-D.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-Sprague-Dawley;
 RA Kirkin V., Makitschek R., Krishnan J., Steffen A., Waltenberger J.,
 RA Pepper M.S., Giannis A., Sleeman J.P.;
 RT "Characterization of indolinones which specifically inhibit VEGF-C and
 RT VEGF-D-induced activation of VEGFR-3 but not VEGFR-2."
 RL Eur. J. Biochem. 0:0-0(2001).
 DR EMBL; AY032728; AAK96008.1; -.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0008083; F:growth factor activity; IEA.
 DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
 DR InterPro; IPR004153; CXXC repeat.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF03128; CXXC; 1.
 DR Pfam; PF00341; PDGF; 1.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF 1; 1.
 DR PROSITE; PS0278; PDGF 2; 1.
 SQ SEQUENCE 326 AA; 37106 MW; D7CAEBA6C9FABB7D CRC64;

Query Match 87.0%; Score 40; DB 11; Length 326;
 Best Local Similarity 75.0%; Pred. No. 2.3;
 Matches 6; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
 |||||:
 Db 151 CNEESVMC 158

RESULT 3

Q8B571 PRELIMINARY; PRT; 152 AA.
 ID Q8B571
 AC Q8B571;
 DT 01-MAR-2003 (TrEMBLrel. 23, Created)
 DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
 DE Vascular endothelial growth factor-like protein.
 GN VEGF.
 OS Pseudocowpox virus.
 OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
 OC Parapoxvirus.
 OX NCBI_TaxID=129726;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=VR634;
 RA Ueda N., Wise L.M., Stacker S.A., Fleming S.B., Mercer A.A.;
 RT "Pseudocowpox virus encodes a homolog of vascular endothelial growth
 RT factor."
 RL Virology 0:0-0(2003).
 DR EMBL; AF542070; AAO16216.1; -.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0008083; F:growth factor activity; IEA.
 DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
 DR InterPro; IPR002400; GF_cys_knot.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF00341; PDGF; 1.
 DR PRINTS; PR00438; GFCYSKNOT.

```

RA Kawate N., Tsuji M., Tamada H., Inaba T., Sawada T.;
RT "Changes of Messenger RNAs Encoding Vascular Endothelial Growth Factor
RT and Its Receptors during the Development and Maintenance of Caprine
RT Corpora Lutea.";
RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AV114353; AM76574.1;
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS0278; PDGF_2; 1.
DR NON_TER 1
FT NON_TER 1
SQ SEQUENCE 65 AA; 7562 MW; BA3E5384364B05E3 CRC64;

Query Match 78.3%; Score 36; DB 6; Length 65;
Best Local Similarity 75.0%; Pred. No. 3.6;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db ||:|||||
5 CNDESLEC 12

RESULT 6
ID O97500 PRELIMINARY; PRT; 68 AA.
AC O97500;
DT 01-MAY-1999 (TRENBLrel. 10, Created)
DT 01-MAY-1999 (TRENBLrel. 10, Last sequence update)
DT 01-JUN-2003 (TRENBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor (Fragment).
GN VEGF.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP SEQUENCE FROM N.A.
RA Inoue K., Kawabe Y., Kodama T.;
RT "Rabbit VEGF cDNA, partial.";
RL Submitted (NOV-1998) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB020216; BAA36949.1; -.
DR HSSP; P49763; 1FZV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS0249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
DR NON_TER 1
FT NON_TER 68
SQ SEQUENCE 68 AA; 7819 MW; 687638661E98DEE0 CRC64;

Query Match 78.3%; Score 35; DB 6; Length 68;
Best Local Similarity 75.0%; Pred. No. 3.8;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db ||:|||||
41 CNDESLEC 48

RESULT 7
ID O18843 PRELIMINARY; PRT; 75 AA.
AC O18843;
DT 01-JAN-1998 (TRENBLrel. 05, Created)

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DT 01-JAN-1998 (TRENBLrel. 05, Last sequence update)
DT 01-JUN-2003 (TRENBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor (Fragment).
GN VEGF.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=NEW ZEALAND WHITE; TISSUE=Skeletal muscle;
RX MEDLINE=98191144; PubMed=9530113;
RA Skotjanc D., Jaschinski F., Heine G., Pette D.;
RT "Sequential increases in capillarization and mitochondrial enzymes in
RT low-frequency-stimulated rabbit muscle.";
RL Am. J. Physiol. 274:C810-C818(1998).
DR EMBL; AF022179; AAC15469.1; -.
DR HSSP; P49763; 1FZV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
FT NON_TER 1
FT NON_TER 75
SQ SEQUENCE 75 AA; 8720 MW; DDCE2C5B29B69359 CRC64;

Query Match 78.3%; Score 36; DB 6; Length 75;
Best Local Similarity 75.0%; Pred. No. 4.1;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db ||:|||||
29 CNDESLEC 36

RESULT 8
ID Q9N1S2 PRELIMINARY; PRT; 78 AA.
AC Q9N1S2;
DT 01-OCT-2000 (TRENBLrel. 15, Created)
DT 01-OCT-2000 (TRENBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TRENBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor isoform 121 (Fragment).
GN VEGF.
OS Capreolus capreolus (Roe deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervioidea;
OC Cervidae; Odocoileinae; Capreolus.
OX NCBI_TaxID=9858;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=20532861; PubMed=11078967;
RA Wagener A., Blottner S., Goritz F., Fickel J.;
RT "Detection of growth factors in the testis of roe deer (Capreolus
RT capreolus).";
RL Anim. Reprod. Sci. 64:65-75(2000).
DR EMBL; AF152593; AAF73232.1; -.
DR HSSP; P49763; 1FZV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.

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DR ProDom; PD001629; PD_growth_factor; 1.

DR SMART; SM00141; PDGF; 1.

DR PROSITE; PS00249; PDGF_1; 1.

DR PROSITE; PS50278; PDGF_2; 1.

FT NON_TER 1 78

FT NON_TER 78 78

SQ SEQUENCE 78 AA; 9131 MW; 7EE20DDFFC17847C CRC64;

Query Match 78.3%; Score 36; DB 6; Length 78;

Best Local Similarity 75.0%; Pred. No. 4.3;

Matches 6; Conservative 1; Mismatches 1; Indels 1; Gaps 0;

QY 1 CNEESLIC 8

DB 25 CNDESLEC 32

RESULT 9

Q8MIN1

ID Q8MIN1 PRELIMINARY; PRT; 109 AA.

AC Q8MIN1;

DT 01-OCT-2002 (TrEMBLrel. 22, Created)

DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)

DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)

DE Vascular endothelial growth factor 165 (Fragment).

OS Capra hircus (Goat).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;

OC Bovidae; Caprinae; Capra.

OC NCBI_TaxID=9925;

QY [1]

SEQUENCE FROM N.A.

TISSUE=Corpus luteum;

RA Kawate N., Tsuji M., Tamada H., Inaba T., Sawada T.;

RT "Changes of Messenger RNAs Encoding Vascular Endothelial Growth Factor

and its Receptors during the Development and Maintenance of Caprine

RT Corpora lutea.";

RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.

DR EMBL; AV114352; AM76673.1; -

DR GO; GO:0016020; C:membrane; IEA.

DR GO; GO:0008083; F:growth factor activity; IEA.

DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.

DR InterPro; IPR000072; PD_growth_factor.

DR Pfam; PF00341; PDGF; 1.

DR ProDom; PD001629; PD_growth_factor; 1.

DR SMART; SM00141; PDGF; 1.

DR PROSITE; PS50278; PDGF_2; 1.

FT NON_TER 1

SQ SEQUENCE 109 AA; 12656 MW; 912657251A37E023 CRC64;

Query Match 78.3%; Score 36; DB 6; Length 109;

Best Local Similarity 75.0%; Pred. No. 5.9;

Matches 6; Conservative 1; Mismatches 1; Indels 1; Gaps 0;

QY 1 CNEESLIC 8

DB 5 CNDESLEC 12

RESULT 10

Q9MZB1

ID Q9MZB1 PRELIMINARY; PRT; 118 AA.

AC Q9MZB1;

DT 01-OCT-2000 (TrEMBLrel. 15, Created)

DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)

DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)

DE Vascular endothelial growth factor (Fragment).

GN VEGF.

OS Ovis aries (Sheep).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;

OC Bovidae; Caprinae; Ovis.

OC NCBI_TaxID=9940;

QY [1]

[1]

SEQUENCE FROM N.A.

TISSUE=Placental artery endothelium;

RA Zheng J., Tsol S.C., Megness R.R.; fetal placental artery endothelial

RT "Growth factor expression in ovine fetal placental artery endothelial

RT cells.";

RL Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.

DR EMBL; AF250375; AAF75258.1; -

DR HSSP; P49763; 1FZV.

DR GO; GO:0016020; C:membrane; IEA.

DR GO; GO:0008083; F:growth factor activity; IEA.

DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.

DR InterPro; IPR002400; GF_cysknot.

DR InterPro; IPR000072; PD_growth_factor.

DR Pfam; PF00341; PDGF; 1.

DR PRINTS; PR00438; GFCYSKNOT.

DR ProDom; PD001629; PD_growth_factor; 1.

DR SMART; SM00141; PDGF; 1.

DR PROSITE; PS00249; PDGF_1; 1.

DR PROSITE; PS50278; PDGF_2; 1.

FT NON_TER 1

SQ SEQUENCE 118 AA; 13931 MW; 757DC53AA56378A6 CRC64;

Query Match 78.3%; Score 36; DB 6; Length 118;

Best Local Similarity 75.0%; Pred. No. 6.3;

Matches 6; Conservative 1; Mismatches 1; Indels 1; Gaps 0;

QY 1 CNEESLIC 8

DB 58 CNDESLEC 65

RESULT 11

Q866G4

ID Q866G4 PRELIMINARY; PRT; 120 AA.

AC Q866G4;

DT 01-JUN-2003 (TrEMBLrel. 24, Created)

DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)

DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)

DE Vascular endothelial growth factor (Fragment).

VEGF.

OS Oryctolagus cuniculus (Rabbit).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.

OC NCBI_TaxID=9986;

QY [1]

SEQUENCE FROM N.A.

RA Clausen I., Kietz S., Fischer B.;

RT "Transcriptional changes in rabbit preimplantation blastocysts upon

exposure to polychlorinated biphenyls.";

RL Submitted (DEC-2002) to the EMBL/GenBank/DBJ databases.

DR EMBL; AY196796; AAC42518.1; -

DR GO; GO:0016020; C:membrane; IEA.

DR GO; GO:0008083; F:growth factor activity; IEA.

DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.

DR InterPro; IPR002400; GF_cysknot.

DR InterPro; IPR000072; PD_growth_factor.

DR Pfam; PF00341; PDGF; 1.

DR PRINTS; PR00438; GFCYSKNOT.

DR ProDom; PD001629; PD_growth_factor; 1.

DR SMART; SM00141; PDGF; 1.

DR PROSITE; PS00249; PDGF_1; 1.

DR PROSITE; PS50278; PDGF_2; 1.

FT NON_TER 1

FT NON_TER 120 120

SQ SEQUENCE 120 AA; 14032 MW; E563C54980DCE1E8 CRC64;

Query Match 78.3%; Score 36; DB 6; Length 120;

Best Local Similarity 75.0%; Pred. No. 6.4;

Matches 6; Conservative 1; Mismatches 1; Indels 1; Gaps 0;

QY 1 CNEESLIC 8

DB 58 CNDESLEC 65


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Db 74 CNDESLEC 81

RESULT 12
Q9N1S1
ID Q9N1S1 PRELIMINARY; PRT; 123 AA.
AC Q9N1S1;
DT 01-OCT-2000 (TREMELrel. 15, Created)
DT 01-OCT-2000 (TREMELrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMELrel. 24, Last annotation update)
DE Vascular endothelial growth factor isoform 165 (Fragment).
GN VEGF.
OS Capreolus capreolus (Roe deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervioidea;
OC Cervidae; Odocoileinae; Capreolus.
OX NCBI_TaxID=9858;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=20532861; PubMed=11078967;
RA Wagener A., Blottner S., Goritz F., Fickel J.;
RT "Detection of growth factors in the testis of roe deer (Capreolus capreolus).";
RL Anim. Reprod. Sci. 64:65-75 (2000).
DR EMBL; AF152594; AAF73233.1; -.
DR HSSP; P49763; 1FZV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR PRODOM; PD001629; PD_growth_factor; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
FT NON_TER 1
FT NON_TER 123
SQ SEQUENCE 123 AA; 14354 MW; 0A756F54105A4CE1 CRC64;

Query Match 78.3%; Score 36; DB 6; Length 123;
Best Local Similarity 75.0%; Pred. No. 6;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
Db 25 CNDESLEC 32

RESULT 13
Q8MJ86
ID Q8MJ86 PRELIMINARY; PRT; 131 AA.
AC Q8MJ86;
DT 01-OCT-2002 (TREMELrel. 22, Created)
DT 01-OCT-2002 (TREMELrel. 22, Last sequence update)
DT 01-JUN-2003 (TREMELrel. 24, Last annotation update)
DE Vascular endothelial growth factor-3 (Fragment).
OS Capreolus capreolus (Roe deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervioidea;
OC Cervidae; Odocoileinae; Capreolus.
OX NCBI_TaxID=9858;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=20532861; PubMed=11078967;
RA Wagener A., Fickel J.;
RT "Detection of VEGF in roe deer testis.";
RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF514284; AAM49789.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.

Query Match 78.3%; Score 36; DB 6; Length 123;
Best Local Similarity 75.0%; Pred. No. 6;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
Db 25 CNDESLEC 32

RESULT 14
Q9YMF3
ID Q9YMF3 PRELIMINARY; PRT; 132 AA.
AC Q9YMF3;
DT 01-MAY-1999 (TREMELrel. 10, Created)
DT 01-MAY-1999 (TREMELrel. 10, Last sequence update)
DT 01-JUN-2003 (TREMELrel. 24, Last annotation update)
DE Vascular endothelial growth factor homolog Vegf-e (Vascular endothelial growth factor-like protein).
GN VEGF-E.
OS Orf virus.
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=10258;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=D1701;
RX MEDLINE=99107753; PubMed=9889193;
RA Meyer M., Clausen M., Lepple-Wienhues A., Waltenberger J.,
RA Augustin H.G., Ziche M., Lanz C., Buettner M., Rziha H.J., Dehio C.;
RT "A novel vascular endothelial growth factor encoded by orf virus, VEGF-E, mediates angiogenesis via signalling through VEGFR-2 (KDR) but not VEGFR-1 (Flt-1) receptor tyrosine kinases.";
RL EMBO J. 18:363-374 (1999).
RN [2]
RP SEQUENCE FROM N.A.
RX STRAIN=D1701;
RX PubMed=12692275;
RA Rziha H.-J., Bauer B., Adam K.-H., Rottgen M., Cottone R., Henkel M.,
RA Dehio C., Buettner M.;
RT "Relatedness and heterogeneity at the near-terminal end of the genome of a parapoxvirus bovis 1 strain (B177) compared with parapoxvirus J. Gen. Virol. 84:1111-1116 (2003).
RL EMBL; AF106020; AAD03735.1; -.
DR EMBL; AY186732; AA031702.1; -.
DR HSSP; P49763; 1FZV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR PRODOM; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 132 AA; 14763 MW; 15F403A068B72926 CRC64;

Query Match 78.3%; Score 36; DB 12; Length 132;
Best Local Similarity 75.0%; Pred. No. 7;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
```

QY 1 CNEESLIC 8
DB 70 CNDESLEC 77

RESULT 15

Q80GE8 Q80GE8 PRELIMINARY; PRT; 136 AA.
AC Q80GE8;
DT 01-JUN-2003 (TREMBLrel. 24, Created)
DT 01-JUN-2003 (TREMBLrel. 24, Last sequence update)
DT 01-OCT-2003 (TREMBLrel. 25, Last annotation update)
DE VEGF-like protein.
OS Orf virus.
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=10258;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Orf-11;
RA McInnes C.J., Wood A.R.;
RT "A preliminary transcript map of the early genes of orf virus."
RL Submitted (FEB-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY236150; AAP03726.1;
DR GO; GO:0016020; C.membrane; IEA.
DR GO; GO:0008083; F.growth factor activity; IEA.
DR GO; GO:0008151; P.cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_Cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF 1; 1.
DR PROSITE; PS0278; PDGF 2; 1.
SQ SEQUENCE 136 AA; 15082 MW; 9768C9C42E6CB267 CRC64;

Query Match 78.3%; Score 36; DB 12; Length 136;

Best Local Similarity 75.0%; Pred. No. 7.2; Indels 0; Gaps 0;
Matches 6; Conservative 1; Mismatches 1;

QY 1 CNEESLIC 8
DB 71 CNDESLEC 78

Search completed: September 5, 2004, 09:59:54
Job time : 20.101 secs

GenCore version 5.1.6

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OM protein - protein search, using sw model

Run on:

September 5, 2004, 09:37:49 ; Search time 26.2626 Seconds
(without alignments)
86.068 Million cell updates/sec

Title:

US-09-761-636A-6

Perfect score:

46

Sequence:

1 CNEESLIC 8

Scoring table:

BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched:

1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters:

1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

A_Geneseq_29Jan04: *
1: Geneseq1980s: *
2: Geneseq1990s: *
3: Geneseq2000s: *
4: Geneseq2001s: *
5: Geneseq2002s: *
6: Geneseq2003as: *
7: Geneseq2003bs: *
8: Geneseq2004s: *

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	46	100.0	8	AAU04525	AAU04525 VEGF base
2	46	100.0	9	AAU04528	AAU04528 VEGF base
3	46	100.0	73	AAU04522	AAU04522 Human VEG
4	46	100.0	96	AAU04520	AAU04520 Human VEG
5	46	100.0	109	AAU04520	AAU04520 Human VEG
6	46	100.0	109	AAU04520	AAU04520 Human VEG
7	46	100.0	109	AAU04520	AAU04520 Human VEG
8	46	100.0	109	AAU04520	AAU04520 Human VEG
9	46	100.0	287	ABG73779	ABG73779 Human NVR
10	46	100.0	325	AAW53240	AAW53240 Homo sapi
11	46	100.0	354	AAW53240	AAW53240 Homo sapi
12	46	100.0	354	AAW53240	AAW53240 Homo sapi
13	46	100.0	354	AAW53240	AAW53240 Homo sapi
14	46	100.0	354	AAW53240	AAW53240 Homo sapi
15	46	100.0	354	AAW53240	AAW53240 Homo sapi
16	46	100.0	354	AAW53240	AAW53240 Homo sapi
17	46	100.0	354	AAW53240	AAW53240 Homo sapi
18	46	100.0	354	AAW53240	AAW53240 Homo sapi
19	46	100.0	354	AAW53240	AAW53240 Homo sapi
20	46	100.0	354	AAW53240	AAW53240 Homo sapi
21	46	100.0	354	AAW53240	AAW53240 Homo sapi
22	46	100.0	354	AAW53240	AAW53240 Homo sapi
23	46	100.0	354	AAW53240	AAW53240 Homo sapi
24	46	100.0	354	AAW53240	AAW53240 Homo sapi
25	43	93.5	8	AAU04539	AAU04539 VEGF base

26	42	91.3	8	4	AAU04541	AAU04541 VEGF base
27	41	89.1	8	4	AAU04538	AAU04538 VEGF base
28	41	89.1	9	4	AAU04552	AAU04552 VEGF base
29	41	89.1	109	6	ABG73750	ABG73750 Human VEG
30	40	87.0	9	4	AAU04553	AAU04553 VEGF base
31	40	87.0	326	2	AAW44296	AAW44296 Rat vascu
32	39	84.8	8	4	AAU04540	AAU04540 VEGF base
33	39	84.8	354	4	AAW70685	AAW70685 Human vas
34	39	84.8	620	2	AAW14994	AAW14994 Human c-f
35	37	80.4	923	4	ABG20904	ABG20904 Novel hum
36	36	78.3	101	2	AAW86229	AAW86229 Poxvirus
37	36	78.3	106	2	AAW86228	AAW86228 Poxvirus
38	36	78.3	110	5	AAW47933	AAW47933 Mouse VEG
39	36	78.3	111	2	AAW86227	AAW86227 Poxvirus
40	36	78.3	116	2	AAW86226	AAW86226 Poxvirus
41	36	78.3	120	2	AAW10916	AAW10916 Bovine VE
42	36	78.3	120	2	AAW38916	AAW38916 Bovine VE
43	36	78.3	132	2	AAW40305	AAW40305 Parapox v
44	36	78.3	132	2	AAW33434	AAW33434 Parapox v
45	36	78.3	132	3	AAW92776	AAW92776 Orf virus

ALIGNMENTS

RESULT 1
ID AAU04525 standard; peptide; 8 AA.
XX
AC AAU04525;
XX
DT 26-SEP-2001 (first entry)
XX
DE VEGF based monocyclic peptide 2.
XX
KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Disulfide-bond 1..8 /note= "This bond cyclises the peptide"
XX
PN WO200152875-A1.
XX
PD 26-JUL-2001.
XX
PF 18-JAN-2001; 2001WO-US001533.
XX
PR 18-JAN-2000; 2000US-0176293P.
PR 16-MAY-2000; 2000US-0204590P.
XX
PA (LUDW-) LUDWIG INST CANCER RES.
XX
PI Achen MG, Hughes RA, Stacker S, Cendron A;
XX
DR MPI; 2001-442248/47.
XX
PT Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
FT from an exposed loop of a growth factor protein by oxidizing the cysteine
XX residues.
PS Claim 49; Page 32; 102pp; English.
XX
CC The sequence represents a monomeric monocyclic peptide of the invention,
CC whose 3-dimensional structure is modelled on the exposed loop of human
CC VEGF (vascular endothelial growth factor). The invention relates to a
CC method of producing a monomeric monocyclic peptide by a measuring beta-
CC beta carbon separation distances on opposite antiparallel strands of a

peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and diabetic retinopathy

Sequence 8 AA;
Query Match 100.0%; Score 46; DB 4; Length 8;
Best Local Similarity 100.0%; Pred. No. 1.4e+06;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
| | | | |
Db 1 CNEESLIC 8

RESULT 2
AAU04528
ID AAU04528 standard; protein; 9 AA.

AC AAU04528;
XX
XX
DT 26-SEP-2001 (first entry)
XX
DE VEGF based bicyclic dimeric peptide #2.
XX
KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.

XX Synthetic.

XX Key Location/Qualifiers
FT Disulfide-bond 1 /note= "A disulfide bond forms between residue 1 and
FT residue 1 of an identical peptide to form a dimeric
FT peptide, or between residue 1 and residue 17 of the
FT sequence appearing as AAU04527 also forming a dimeric
FT peptide"

FT Disulfide-bond 2...9 /note= "This bond cyclises the peptide"

FT WO200152875-A1.

XX 26-JUL-2001.

PD 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

PR 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

PA Achen MG, Hughes RA, Stacker S, Cendron A;

XX
PI

XX WPI; 2001-442248/47.
XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
PT or lymphangiogenesis, is produced by cyclising a peptide loop fragment
PT from an exposed loop of a growth factor protein by oxidizing the cysteine
PT residues.
XX Claim 59; Page 32; 102pp; English.
XX The sequence represents a dimeric bicyclic peptide of the invention,
XX whose 3-dimensional structure is modelled on the expose loop of human
CC VEGF-D (vascular endothelial growth factor). The invention relates to a
CC method of producing a monomeric monocyclic peptide by a measuring beta-
CC beta carbon separation distances on opposite antiparallel strands of a
CC peptide loop fragment from an exposed loop of a growth factor protein and
CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
CC peptides) and a cyclic peptide with at least one amino acid deleted prior
CC to cyclisation are used to interfere with angiogenesis,
CC neovascularisation or lymphangiogenesis in a mammal with a condition
CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
CC The condition is diabetic retinopathy, psoriasis, arthropathy,
CC hemangioma, vascularised malignant or benign tumour, post-recovery
CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
CC trauma, substance-induced neovascularisation of the liver, excessive
CC hormone-related angiogenic dysfunction, diabetes induced neovascular
CC sequelae, hypertension induced neovascular sequelae, or chronic liver
CC infection. The peptides are also used to modulate vascular permeability
CC in a mammal (the mammal has a condition characterised by fluid
CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
CC or brain. The peptides are used to image blood vessels and lymphatic
CC vasculature. The monomeric and bicyclic peptides are used to interfere
CC with at least one biological activity induced by VEGF, VEGF-C or -D and
CC are also used in combination with an anti-inflammatory agent, to treat a
CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
CC diabetic retinopathy

XX Sequence 9 AA;

Query Match 100.0%; Score 46; DB 4; Length 9;
Best Local Similarity 100.0%; Pred. No. 1.4e+06;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
| | | | |
Db 2 CNEESLIC 9

RESULT 3
AAU04522
ID AAU04522 standard; protein; 73 AA.

XX AAU04522;
XX
XX 26-SEP-2001 (first entry)
XX Human VEGF-D amino acids Val101-Thr 173.

XX Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation.

XX Homo sapiens.

OS WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

PR	16-MAY-2000; 2000US-0204590P.
XX	(LUDW-) LUDWIG INST CANCER RES.
XX	Achen MG, Hughes RA, Stacker S, Cendron A;
PI	WPI; 2001-442248/47.
XX	Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
XX	or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
PT	from an exposed loop of a growth factor protein by oxidizing the cysteine
PT	residues.
XX	Example 1; Page 90-91; 102pp; English.
PS	The sequence represents Human VEGF-D (vascular endothelial growth factor)
XX	amino acids Val101-Thr 173, used together with the C-terminal 23 residues
CC	of VEGF to make a hybrid theoretical molecule for 3 dimensional
CC	modelling. The sequence is used in a method of producing a monomeric
CC	monocyclic peptide by a measuring beta-beta carbon separation distances
CC	on opposite antiparallel strands of a peptide loop fragment from an
CC	exposed loop of a growth factor protein and cyclising the peptide by
CC	oxidising the cysteine residues. The monocyclic peptides, dimeric
CC	bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
CC	peptide with at least one amino acid deleted prior to cyclisation are
CC	used to interfere with angiogenesis, neovascularisation or
CC	lymphangiogenesis in a mammal with a condition characterised by
CC	angiogenesis, neovascularisation or lymphangiogenesis. The condition is
CC	diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
CC	malignant or benign tumour, post-recovery cerebrovascular accident, post-
CC	angioplasty restenosis, head, heat or cold trauma, substance-induced
CC	neovascularisation of the liver, excessive hormone-related angiogenic
CC	dysfunction, diabetes induced neovascular sequelae, hypertension induced
CC	neovascular sequelae, or chronic liver infection. The peptides are also
CC	used to modulate vascular permeability in a mammal (the mammal has a
CC	condition characterised by fluid accumulation in peripheral limbs or in
CC	lungs, peritoneal cavity, pleura, or brain). The peptides are used to
CC	image blood vessels and lymphatic vasculature. The monomeric and bicyclic
CC	peptides are used to interfere with at least one biological activity
CC	induced by VEGF, VEGF-C or -D and are also used in combination with an
CC	anti-inflammatory agent, to treat a chronic inflammation, especially
CC	rheumatoid arthritis, psoriasis and diabetic retinopathy
XX	Sequence 73 AA;
SQ	Query Match 100.0%; Score 46; DB 4; Length 73;
	Best Local Similarity 100.0%; Pred. No. 1.1;
	Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY	1 CNEESLIC 8
Db	46 CNEESLIC 53
RESULT 4	
ID	AAU04520 standard; protein; 96 AA.
XX	AAU04520
AC	AAU04520;
XX	26-SEP-2001 (first entry)
DT	Human VEGF-D amino acids Val101-PRO186.
DE	Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
KW	neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW	diabetes induced neovascular sequelae; rheumatoid arthritis;
KX	diabetic retinopathy; chronic inflammation.
OS	Homo sapiens.
XX	WO200152875-A1.
PN	
XX	

PD	26-JUL-2001.
XX	18-JAN-2001; 2001WO-US001533.
PF	18-JAN-2000; 2000US-0176293P.
XX	16-MAY-2000; 2000US-0204590P.
PR	(LUDW-) LUDWIG INST CANCER RES.
XX	Achen MG, Hughes RA, Stacker S, Cendron A;
PI	WPI; 2001-442248/47.
XX	Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
XX	or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
PT	from an exposed loop of a growth factor protein by oxidizing the cysteine
PT	residues.
XX	Example 1; Page 89; 102pp; English.
PS	The sequence represents Human VEGF-D (vascular endothelial growth factor)
XX	amino acids Val101-PRO186. The sequence is used in a method of producing
CC	a monomeric monocyclic peptide by a measuring beta-beta carbon separation
CC	distances on opposite antiparallel strands of a peptide loop fragment
CC	from an exposed loop of a growth factor protein and cyclising the peptide
CC	by oxidising the cysteine residues. The monocyclic peptides, dimeric
CC	bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
CC	peptide with at least one amino acid deleted prior to cyclisation are
CC	used to interfere with angiogenesis, neovascularisation or
CC	lymphangiogenesis in a mammal with a condition characterised by
CC	angiogenesis, neovascularisation or lymphangiogenesis. The condition is
CC	diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
CC	malignant or benign tumour, post-recovery cerebrovascular accident, post-
CC	angioplasty restenosis, head, heat or cold trauma, substance-induced
CC	neovascularisation of the liver, excessive hormone-related angiogenic
CC	dysfunction, diabetes induced neovascular sequelae, hypertension induced
CC	neovascular sequelae, or chronic liver infection. The peptides are also
CC	used to modulate vascular permeability in a mammal (the mammal has a
CC	condition characterised by fluid accumulation in peripheral limbs or in
CC	lungs, peritoneal cavity, pleura, or brain). The peptides are used to
CC	image blood vessels and lymphatic vasculature. The monomeric and bicyclic
CC	peptides are used to interfere with at least one biological activity
CC	induced by VEGF, VEGF-C or -D and are also used in combination with an
CC	anti-inflammatory agent, to treat a chronic inflammation, especially
CC	rheumatoid arthritis, psoriasis and diabetic retinopathy
XX	Sequence 96 AA;
SQ	Query Match 100.0%; Score 46; DB 4; Length 96;
	Best Local Similarity 100.0%; Pred. No. 1.4;
	Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY	1 CNEESLIC 8
Db	46 CNEESLIC 53
RESULT 5	
ID	AAV23889 standard; protein; 109 AA.
XX	AAV23889
AC	AAV23889;
XX	21-SEP-1999 (first entry)
DT	Human vascular endothelial growth factor (VEGF)-D.
DE	Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
KW	tumour; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
KW	wound healing; lymphedema; scleroderma; anhydrotic ectodermal dysplasia.
OS	Homo sapiens.
XX	

PN WO9933485-A1.
 XX 08-JUL-1999.
 XX 23-DEC-1998; 98WO-US027373.
 XX 24-DEC-1997; 97AU-00001131.
 PR 29-MAY-1998; 98US-0087392F.
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX Achen MG, Stacker SA, Alicalo K;
 XX WPI; 1999-405368/34.
 XX A human cell line stably expressing vascular endothelial growth factor D,
 PT useful for treating melanomas or tumors expressing VEGF-D.
 XX Claim 6; Page 72; 79pp; English.
 XX The present sequence represents human vascular endothelial growth factor
 CC (VEGF)-D. The specification describes a human cell line which stably
 CC expresses VEGF-D, or fragments/analogs having VEGF-D biological
 CC activity. VEGF-D antagonists, e.g. antisense nucleic acids or triplex
 CC DNA, VEGF-D variants or antibodies (especially chimeric antibodies), are
 CC useful for the treatment or alleviation of malignant melanomas, tumors
 CC of psoriasis. Angiogenesis and lymphangiogenesis stimulating amounts of
 CC VEGF-D can be administered to enhance the acceptance and/or healing of
 CC skin grafts or to stimulate the healing of a surgical or traumatic wound
 CC to treat lymphedema. Endothelial proliferation stimulating amounts of
 CC VEGF-D are used to treat anhydrotic ectodermal dysplasia. VEGF-D
 CC antibodies are useful for detecting tumors expressing VEGF-D. Fully-
 CC processed VEGF-D can be used to stimulate at least one VEGF-D bioactivity
 CC chosen from endothelial cell proliferation, migration, survival and
 CC permeability
 XX Sequence 109 AA;
 SQ
 Query Match 100.0%; Score 46; DB 2; Length 109;
 Best Local Similarity 100.0%; Pred. NO. 1.6;
 Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 CNEESLIC 8
 Db 54 CNEESLIC 61
 RESULT 6
 AAB11931
 ID AAB11931 standard; protein; 109 AA.
 XX AC AAB11931;
 XX 20-NOV-2000 (first entry)
 DT Human truncated VEGF-D.
 DE Truncated VEGF-D; vascular endothelial growth factor; human;
 XX monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3;
 KW vascular permeability disorder; endothelial cell proliferative disorder;
 KW angiogenic disorder; lymphangiogenic disorder;
 KW neovascularisation disorder; endothelial cell differentiation disorder;
 KW cancer; diabetic retinopathy; psoriasis; arthropathy; pulmonary oedema;
 KW detection; diagnosis; imaging; lymphatic vasculature.
 OS Homo sapiens.
 XX WO200037025-A2.
 PN 29-JUN-2000.
 XX
 PD
 21-DEC-1999; 99WO-US031332.
 XX 21-DEC-1998; 98US-0113254P.
 PR 17-MAY-1999; 99US-0134556P.
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX Achen MG, Stacker SA;
 XX WPI; 2000-442498/38.
 XX Novel compositions comprising antibodies reactive to vascular endothelial
 PT growth factor-D, useful for treating, e.g. angiogenesis, lymphangiogenesis
 PT and neovascularization disorders.
 XX Claim 1; Fig 1; 44pp; English.
 XX This sequence represents a 109 amino acid truncated human VEGF-D
 CC (vascular endothelial growth factor D), lacking both the N- and C-
 CC terminal regions. The invention relates to a monoclonal antibody, or
 CC fragments thereof, which is specifically reactive with the truncated
 CC human VEGF-D, and methods of preparing the antibody. The antibody of the
 CC invention interferes with the binding of VEGF-D to the VEGF receptors
 CC VEGFR-2 and VEGFR-3, but does not interfere with the binding of VEGF to
 CC these receptors and additionally is not reactive with VEGF-C. The
 CC antibody may be used to treat disorders associated with vascular
 CC permeability, endothelial cell proliferation, angiogenesis,
 CC lymphangiogenesis, neovascularisation and endothelial cell
 CC differentiation, especially cancer, diabetic retinopathy, psoriasis, and
 CC arthropathies. The antibody may also be used to treat fluid accumulation
 CC in the heart and/or lung via modulation of vascular permeability. It may
 CC additionally be used to detect VEGF-D and may be used to image lymphatic
 CC vasculature in tissue
 XX Sequence 109 AA;
 SQ
 Query Match 100.0%; Score 46; DB 3; Length 109;
 Best Local Similarity 100.0%; Pred. NO. 1.6;
 Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 CNEESLIC 8
 Db 54 CNEESLIC 61
 RESULT 7
 ABB84621
 ID ABB84621 standard; protein; 109 AA.
 XX AC ABB84621;
 XX 01-APR-2003 (first entry)
 DT Human wild-type VEGF-D monomer SEQ ID 3.
 DE Human; single-chain; extracellular ligand-binding domain; VEGF;
 KW vascular endothelial growth factor; VEGF type 2 receptor; KDR; Flt-4;
 KW VEGF type 3 receptor; VEGF-C; VEGF-D; signal transduction; angiogenesis;
 KW lymphangiogenesis.
 XX Homo sapiens.
 OS
 XX Key 8.18 Location/Qualifiers
 XX Region /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT 36.49
 FT Region /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT 55.60
 FT Region /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT

FT Misc-difference 60
 FT /note= "This residues is described as Gln in Claim 9"
 FT 70. .86
 FT /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 XX WO200281520-A2.
 XX 17-OCT-2002.
 XX 08-APR-2002; 2002WO-DK000233.
 XX 06-APR-2001; 2001DK-00000578.
 PR 06-APR-2001; 2001US-0282239P.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 PA Boesen TP, Halkier T;
 XX WPI; 2003-058505/05.
 PI Novel single-chain dimeric polypeptide for inhibiting angiogenesis, binds
 PT to extracellular ligand-binding domain of vascular endothelial growth
 PT factor type 2/type 3 receptor but does not activate the receptor.
 XX
 PS Claim 9; Page 66; 7lpp; English.
 XX
 CC This invention describes a novel single-chain dimeric polypeptide which
 CC binds to extracellular ligand-binding domain of vascular endothelial
 CC growth factor (VEGF) type 2 receptor (KDR) or VEGF type 3 receptor (Flt-
 CC 4). The polypeptide of the invention comprises two receptor-binding sites
 CC of which one is capable of binding to a ligand-binding domain of the
 CC receptor and one is incapable of binding to a ligand-binding domain of the
 CC domain of the receptor, and at least one monomer of the dimeric
 CC polypeptide is derived from VEGF, VEGF-C or VEGF-D, where the polypeptide
 CC is capable of binding to the receptor, but incapable of activating the
 CC receptor. The polypeptide of the invention is useful for preparing a
 CC medicament for preventing or treating a disease or condition involving
 CC increased signal transduction from, or an increased activation of a VEGF
 CC type 2 or type 3 receptor e.g. for inhibiting angiogenesis or
 CC lymphangiogenesis. This sequence represents a human single-chain VEGF-D
 CC monomer which can be modified and used in the construction of a VEGF-
 CC based KDR antagonist described in the disclosure of the invention
 XX
 SQ Sequence 109 AA;
 Query Match 100.0%; Score 46; DB 6; Length 109;
 Best Local Similarity 100.0%; Pred. No. 1.6;
 Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CNEESLIC 8
 Db 54 CNEESLIC 61
 RESULT 8
 ABG73779
 ID ABG73779 standard; protein; 287 AA.
 AC ABG73779;
 XX
 DT 03-APR-2003 (first entry)
 XX Human NVR protein.
 XX
 KW NVR; human; endothelial growth factor; cytostatic; cancer; angiogenesis;
 KW cell proliferation; revascularisation; amputation; vasculogenesis;
 KW transplant; brain; breast; intestine; kidney; lung; ovary; pancreas;
 KW prostate; uterus; gene therapy.
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers

FT Misc-difference 281
 FT /note= "Encoded by TAA, an in frame stop codon which
 FT interrupts the coding region as shown in Figure 1A-B.
 FT This site is the end of the protein sequence represented
 FT in SEQ ID 1 of the Sequence listing"
 XX 282. .287
 FT /note= "Region not represented in SEQ ID 1 of the
 FT Sequence listing"
 XX
 EN US2002155538-A1.
 XX 24-OCT-2002.
 PD 09-JAN-2002; 2002US-00044622.
 PF 23-JAN-1997; 97US-00788812.
 XX (INCY-) INCYTE PHARM INC.
 XX Bandman O, Goli SK, Murry LE;
 PI WPI; 2003-182635/18.
 XX N-PSDB; ABQ77105.
 DR
 DR
 XX
 PT New endothelial growth factor polypeptide and polynucleotides, useful for
 PT diagnosing, preventing, and treating cancer and other conditions or
 PT diseases involving angiogenesis and cell proliferation.
 XX
 PS Claim 1; Fig 1A-B; 28pp; English.
 XX
 CC This invention describes a novel human endothelial growth factor
 CC polypeptide which has cytostatic activity. The polypeptide and its
 CC encoding polynucleotide are useful in the diagnosis, prevention, and
 CC treatment of cancer and other conditions or diseases involving, and
 CC angiogenesis and cell proliferation. NVR may also be used to promote
 CC revascularisation following traumatic amputation and surgical
 CC reconstruction or added to a tissue culture to promote vasculogenesis in
 CC tissues for autologous or heterologous transplant. Antagonists or
 CC inhibitors of NVR may be used to suppress or prevent angiogenesis and
 CC thus prevent the growth and development of cancers such as cancer of the
 CC brain, breast, intestine, kidney, lung, ovary, pancreas, prostate or
 CC uterus. The products of the invention can be used for gene therapy. This
 CC sequence represents the human NVR protein described in the disclosure of
 CC the invention
 XX
 SQ Sequence 287 AA;
 Query Match 100.0%; Score 46; DB 6; Length 287;
 Best Local Similarity 100.0%; Pred. No. 4.1;
 Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CNEESLIC 8
 Db 146 CNEESLIC 153
 RESULT 9
 AAW53240
 ID AAW53240 standard; protein; 325 AA.
 XX
 AC AAW53240;
 XX
 DT 03-AUG-1998 (first entry)
 XX Homo sapiens vascular endothelial growth factor D (VEGF-D).
 DE
 XX
 KW vascular endothelial growth factor; VEGF-D; angiogenesis; modification;
 KW acceleration; wound healing; tissue; organ; transplants;
 KW collateral circulation; infarction; arterial stenosis;
 KW coronary artery disease; inhibition; cancer; treatment;
 KW diabetic retinopathy; lung disorders; blood circulation;
 KW gaseous exchange; chronic obstructive airway disease;
 KW intestinal malabsorptive syndrome; biopsy; metastatic risk; detection;

XX	diagnosis; congestive heart failure.	XX	AA97572;
XX	Homo sapiens.	XX	05-APR-2001 (first entry)
XX	Key	XX	Human VEGF-D protein sequence.
XX	Location/Qualifiers	XX	Human; angiogenic protein; wound healing; vascular tissue repair;
XX	126..128	XX	peripheral arterial disease; critical limb ischemia; coronary disease;
XX	/note= "potential N-linked glycosylation site"	XX	angiogenesis; tumour; inflammation; diabetic retinopathy; psoriasis;
XX	156..158	XX	rheumatoid arthritis; autoimmune disease; allergy; cancer; therapy;
XX	/note= "potential N-linked glycosylation site"	XX	infectious disease; neurodegeneration;
XX	258..260	XX	vascular endothelial growth factor-D; VEGF-D.
XX	/note= "potential N-linked glycosylation site"	XX	Homo sapiens.
XX	WO9807832-A1.	XX	WO200075163-A1.
XX	26-FEB-1998.	XX	14-DEC-2000.
XX	21-AUG-1997;	XX	01-JUN-2000; 2000WO-US014925.
XX	23-AUG-1996;	XX	03-JUN-1999; 99US-0137796P.
XX	23-AUG-1996;	XX	(HUMA-) HUMAN GENOME SCI INC.
XX	11-NOV-1996;	XX	Rosen CA, Ruben SM, Hu J, Cao L;
XX	14-NOV-1996;	XX	WPI; 2001-071057/08.
XX	05-FEB-1997;	XX	N-PSDB; AAA91006.
XX	10-FEB-1997;	XX	New nucleic acid encoding angiogenic proteins, useful e.g. for promoting
XX	19-JUN-1997;	XX	healing of wounds and treating peripheral arterial disease, critical limb
XX	01-JUL-1997;	XX	ischemia or coronary disease.
XX	97AU-0051426P.	XX	Claim 11; Page 226-227; 244pp; English.
XX	(LUDW-) LUDWIG INST CANCER RES.	XX	This sequence is vascular endothelial growth factor-D (VEGF-D), which is
XX	(UYHE-) UNIV HELSINKI LICENSING LTD.	XX	an angiogenic protein of the invention. The angiogenic proteins and the
XX	Achen MG, Wilks AP, Stacker SA, Alitalo K;	XX	DNA sequences encoding them, are used to prevent, treat or ameliorate
XX	WPI; 1998-179057/16.	XX	disease and to detect diseases, or susceptibility, by detecting mutations
XX	N-PSDB; AAV20806.	XX	or the presence or amount of angiogenic protein expression. Particularly
XX	New isolated vascular endothelial growth factor-D - used to develop	XX	they are used to stimulate wound healing, growth of damaged bone and
XX	products for use in e.g. modifying angiogenesis or treating lung, heart	XX	tissue, and for repair of vascular tissue, especially peripheral arterial
XX	or intestinal disorders.	XX	disease, critical limb ischemia or coronary disease. Antagonists of the
XX	Claim 16; Page 57-58; 101pp; English.	XX	sequences are used to inhibit angiogenesis in tumours and to treat
XX	The sequence is that of human breast vascular endothelial growth factor D	XX	inflammation (where associated with increased vascular permeability),
XX	(VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis in	XX	diabetic retinopathy, rheumatoid arthritis or psoriasis. Agonists are
XX	wound healing, tissue or organ transplantation, or to establish	XX	also useful for stimulating (lymph)angiogenesis. The proteins are also
XX	collateral circulation in tissue infarction or arterial stenosis, such as	XX	used to identify specific binding agents (potential therapeutic agents)
XX	coronary artery disease, and inhibition of angiogenesis in the treatment	XX	and to raise antibodies. The antibodies are useful as therapeutic
XX	of cancer or of diabetic retinopathy. It can also be used in the	XX	(ant)agonists; for detection, purification and targeting of proteins for
XX	treatment of lung disorders to improve blood circulation in the lung	XX	in vivo or in vitro diagnosis (including imaging) or for therapy
XX	and/or gaseous exchange between the lungs and the blood stream or to	XX	(including when linked to e.g. a label or cytotoxin); and for
XX	improve blood circulation to the heart and O2 gas permeability in cases	XX	immunotyping of cells, e.g. for detecting minimal residual disease or
XX	of cardiac insufficiency, to improve blood flow and gaseous exchange in	XX	haematopoietic progenitor/stem cells. It is also contemplated that the
XX	chronic obstructive airway disease, or to treat malabsorptive syndromes	XX	sequences might be useful for treating a very wide range of other
XX	in the intestinal tract. Quantitation of VEGF-D in cancer biopsy	XX	disorders, e.g. autoimmune diseases; allergy; cancer; infectious diseases
XX	specimens may be useful as an indicator of future metastatic risk.	XX	(viral, bacterial, fungal or parasitic); neurodegeneration, also as
XX	Antagonists can be used for treating e.g. conditions such as congestive	XX	chemotactic agents or for stimulating regeneration of the nervous system
XX	heart failure, involving accumulations of fluid in the lung resulting	XX	etc
XX	from increases in vascular permeability. The products can also be used	XX	Sequence 325 AA;
XX	for detection and diagnosis	XX	Query Match 100.0%; Score 46; DB 2; Length 325;
XX	Best Local Similarity 100.0%; Pred. No. 4.6;	XX	Best Local Similarity 100.0%; Pred. No. 4.6;
XX	Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	XX	Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX	QY 1 CNEESLIC 8	XX	QY 1 CNEESLIC 8
XX	DB 117 CNEESLIC 124	XX	DB 117 CNEESLIC 124
XX	RESULT 10	XX	RESULT 10
XX	AA97572	XX	AA97572
XX	ID AA97572 standard; protein; 325 AA.	XX	ID AA97572 standard; protein; 325 AA.

RESULT 11

AAW44293
ID AAW44293 standard; protein; 354 AA.XX AC
XX AAW44293;

XX DT 22-JUN-1998 (first entry)

XX DE Human vascular endothelial growth factor D.

XX DE Human; vascular endothelial growth factor D; VEGF-D; gene therapy;
inflammation; oedema.

XX OS Homo sapiens.

XX PN WO9802543-A1.

XX PD 22-JAN-1998.

XX PF 15-JUL-1997; 97WO-JP002456.

XX PR 15-JUL-1996; 96JP-00185216.

XX PA (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC.

XX PI Hirata Y, Nezu J;

XX DR WPI; 1998-110591/10.

XX DR N-PSDB; AAV15156.

XX PT VEGF-D protein encoded by DNA - useful for, e.g. gene therapy and
treating oedema.

XX PS Claim 1; Page 18-20; 52pp; Japanese.

XX CC The present sequence represents human vascular endothelial growth factor
D (VEGF-D). The VEGF-D protein, compounds and antibodies, which can bind
the protein, may be useful in, e.g. gene therapy and in treatment of
inflammation and oedema. Vectors, containing the VEGF-D DNA, and VEGF-D
DNA sequences may be used for screening for the compounds which bind to
the VEGF-D protein

XX SQ Sequence 354 AA;

Query Match 100.0%; Score 46; DB 2; Length 354;

Best Local Similarity 100.0%; Pred. No. 5;

Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CNEESLIC 8

Db 146 CNEESLIC 153

RESULT 12

AAW49036

ID AAW49036 standard; protein; 354 AA.

XX AC

XX AAW49036;

XX DT 26-OCT-1998 (first entry)

XX DE Human zveg2 growth factor.

XX KW Human zveg2 growth factor; mitogen; fibroblast; smooth muscle cell;
venous stasis ulcer; diabetic ulcer; skin wound; chemotactic effect;
angiogenic effect; tumour; diabetic retinopathy; psoriasis; arthritis;
scleroderma.

XX OS Homo sapiens.

XX FH Key

Location/Qualifiers

FT Peptide

1..23

/note= "Signal peptide"

FT Peptide 24..108
 FT Binding-site /note= "Pro-region"
 FT Region 109..197
 FT Region 206..256
 FT Region /note= "Cysteine-rich domain"
 FT Region 257..274
 FT Region /note= "Balbiani ring motif"
 FT Region 275..294
 FT Region /note= "Balbiani ring motif"
 FT Region 295..354
 FT Region /note= "Cysteine-rich domain"

WO9824811-A2.

XX 11-JUN-1998.

XX 20-NOV-1997; 97WO-US020888.

XX 06-DEC-1996; 96US-00759657.

XX 18-SEP-1997; 97US-00933455.

XX (ZYMO) ZYMOGENETICS INC.

XX Gilbert T, Conklin DC, Hart CE, Nygaard S, Sheppard PO;

XX WPI; 1998-333256/29.

XX N-PSDB; AAV32823.

XX New isolated vascular endothelial growth factor - used to develop
 products for treating e.g. wounds, burns, myocardial infarction, tumours,
 psoriasis, arthritis, restenosis or organ transplants.

XX Claim 1; Page 53-54; 77pp; English.

XX The present sequence represents a human zveg2 growth factor encoded by
 the zveg2 cDNA which was isolated from a human heart cDNA library.
 CC zveg2 protein in a dimeric form acts as a mitogen for fibroblasts or
 smooth muscle cells. zveg2 is claimed to be useful for stimulating the
 revascularisation of tissue or the re-endothelialisation of vascular
 tissue. zveg2 is particularly claimed to be useful for the treatment of
 full-thickness skin wounds, including venous stasis ulcers and diabetic
 ulcers. The zveg2 protein is also claimed to be useful as an additive in
 tissue adhesives for promoting revascularisation of the healing tissue.
 CC Antagonists against zveg2 can be used to block its mitogenic,
 chemotactic and angiogenic effects. The antagonists may therefore be
 useful for reducing growth of solid tumours by inhibiting
 CC neovascularisation of the developing tumour or by directly blocking
 CC tumour cell growth, in the treatment of diabetic retinopathy, psoriasis,
 CC arthritis, and scleroderma

SQ Sequence 354 AA;

Query Match

Best Local Similarity 100.0%; Score 46; DB 2; Length 354;

Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CNEESLIC 8

Db 146 CNEESLIC 153

RESULT 13

AAW53241

ID AAW53241 standard; protein; 354 AA.

XX AC AAW53241;

XX 03-AUG-1998 (first entry)

XX Homo sapiens vascular endothelial growth factor D (VEGF-D).

XX vascular endothelial growth factor; VEGF-D; angiogenesis; modification;

DE Human prepro-vascular endothelial growth factor D.
 XX
 KW Human; receptor tyrosine kinase; RTK; Flt4; fms-like tyrosine kinase 4;
 KW VEGFR-3; vascular endothelial growth factor receptor-3; chromosome 5q35;
 KW cytosolic; tumour imaging; anti-tumour therapy; treatment; diagnosis;
 KW neoplastic disease; lymphoma; carcinoma; breast; squamous cell; melanoma;
 KW sarcoma; malignancy; VEGF-D; vascular endothelial growth factor D.
 XX
 OS Homo sapiens.
 XX
 XX WO2000021560-A1.
 XX
 XX 20-APR-2000.
 XX
 XX 08-OCT-1999; 99WO-US023525.
 XX
 XX 09-OCT-1998; 98US-00169079.
 XX
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX (UYHE-) UNIV HELSINKI LICENSING LTD OY.
 XX
 XX Alitalo K, Kaipainen A, Valtola R, Jussila L;
 XX MPI; 2000-317850/27.
 XX
 XX Treating neoplastic diseases such as lymphoma, carcinomas, melanomas and
 PT sarcomas, involves administering a compound capable of inhibiting binding
 PT of ligand proteins to fms-like tyrosine kinase-1 receptor.
 XX
 XX Example 15-17; Page 142-143; 148pp; English.
 XX
 XX The patent discloses a method to treat neoplastic disease characterised
 CC by expression of fms-like tyrosine kinase 4 (Flt4) receptor (also
 CC referred as vascular endothelial growth factor receptor-3, VEGFR-3) in
 CC endothelial cells of blood vessels adjacent to malignant neoplasm. The
 CC method involves administering a compound that inhibits binding of a
 CC ligand to Flt4 thereby inhibiting Flt4 mediated proliferation of vascular
 CC endothelial cells. The compound is useful for treating neoplastic disease
 CC such as breast carcinomas, squamous cell carcinomas, lymphomas, melanomas
 CC and sarcomas. Flt4 receptor tyrosine kinase binding compounds can be used
 CC for manufacturing medicament useful for diagnostic screening, imaging and
 CC treatment of malignancies characterised by Flt4-expressing blood cells.
 CC The Flt4 gene maps to chromosomal region 5q35 and is expressed as 5.8 kb
 CC and 4.5 kb mRNAs which differ in their 3' sequences and are
 CC differentially expressed in HEL and DAMI cell lines. Flt4 belongs to a
 CC subfamily of class III receptor tyrosine kinases (RTKs). It is used as a
 CC target for tumour imaging and anti-tumour therapy. The present sequence
 CC is a human prepro-vascular endothelial growth factor D (VEGF-D), a
 CC specific example of Flt4 binding compound. A recombinantly matured VEGF-D
 CC lacking residues 1-92 and 202-354 retains the ability to activate VEGFR-2
 CC and VEGFR-3 receptors and associate as non-covalently linked dimers
 XX
 XX Sequence 354 AA;
 SQ
 Query Match 100.0%; Score 46; DB 3; Length 354;
 Best Local Similarity 100.0%; Pred. No. 5;
 Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CNEESLIC 8
 Db 146 CNEESLIC 153

Search completed: September 5, 2004, 09:55:10
 Job time : 27.2626 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 10:00:15 ; Search time 22.4646 Seconds
(without alignments)
112.199 Million cell updates/sec

Title: US-09-761-636A-6

Perfect score: 46

Sequence: 1 CNEESLIC 8

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1298764 seqs, 315065143 residues

Total number of hits satisfying chosen parameters: 1298764

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:
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2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
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4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep.*
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9: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep.*
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16: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep.*
17: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep.*
18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	46	100.0	8	9	US-09-761-636A-9
3	46	100.0	73	9	US-09-761-636A-3
4	46	100.0	96	9	US-09-761-636A-1
5	46	100.0	109	9	US-09-956-095-3
6	46	100.0	109	9	US-09-219-345A-1
7	46	100.0	109	16	US-10-779-731-1
8	46	100.0	197	12	US-10-352-153-8
9	46	100.0	280	13	US-10-044-622-1
10	46	100.0	325	14	US-10-274-953-3
11	46	100.0	325	14	US-10-161-694-3
12	46	100.0	354	9	US-09-956-095-2
13	46	100.0	354	9	US-09-219-345A-11
14	46	100.0	354	9	US-09-795-006A-119
15	46	100.0	354	10	US-09-375-248-6

16	46	100.0	354	12	US-09-765-534B-22	Sequence 22, Appl
17	46	100.0	354	12	US-10-661-740-6	Sequence 6, Appl
18	46	100.0	354	14	US-10-262-538-26	Sequence 26, Appl
19	46	100.0	354	14	US-10-274-953-5	Sequence 5, Appl
20	46	100.0	354	14	US-10-161-694-5	Sequence 5, Appl
21	43	93.5	8	9	US-09-761-636A-20	Sequence 20, Appl
22	42	91.3	8	9	US-09-761-636A-22	Sequence 22, Appl
23	41	89.1	8	9	US-09-761-636A-19	Sequence 19, Appl
24	41	89.1	9	9	US-09-761-636A-33	Sequence 33, Appl
25	40	87.0	9	9	US-09-761-636A-34	Sequence 34, Appl
26	39	84.8	8	9	US-09-761-636A-21	Sequence 21, Appl
27	39	84.8	354	14	US-10-174-930-1	Sequence 1, Appl
28	39	84.8	362	13	US-10-139-876-4	Sequence 4, Appl
29	37	80.4	172	12	US-10-424-599-211285	Sequence 211285,
30	36	78.3	49	13	US-10-139-876-11	Sequence 11, Appl
31	36	78.3	81	13	US-10-086-623-18	Sequence 18, Appl
32	36	78.3	81	14	US-10-260-539-18	Sequence 18, Appl
33	36	78.3	110	10	US-09-847-524-6	Sequence 6, Appl
34	36	78.3	132	9	US-09-795-006A-151	Sequence 151, App
35	36	78.3	132	12	US-10-352-153-11	Sequence 11, Appl
36	36	78.3	133	9	US-09-852-209A-11	Sequence 11, Appl
37	36	78.3	133	12	US-10-439-337A-11	Sequence 11, Appl
38	36	78.3	133	12	US-10-303-997B-11	Sequence 11, Appl
39	36	78.3	133	12	US-10-352-153-2	Sequence 11, Appl
40	36	78.3	133	14	US-10-131-600-11	Sequence 11, Appl
41	36	78.3	190	14	US-10-177-485-4	Sequence 11, Appl
42	36	78.3	190	14	US-10-155-492-4	Sequence 4, Appl
43	36	78.3	321	10	US-09-847-524-4	Sequence 4, Appl
44	36	78.3	321	14	US-10-274-953-9	Sequence 9, Appl
45	36	78.3	321	14	US-10-161-694-9	Sequence 9, Appl

ALIGNMENTS

RESULT 1
US-09-761-636A-6
; Sequence 6, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 6
; LENGTH: 8
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-761-636A-6

Query Match 100.0%; Score 46; DB 9; Length 8;
Best Local Similarity 100.0%; Pred. No. 1.2e+06;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
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Db 1 CNEESLIC 8

RESULT 2
US-09-761-636A-9
; Sequence 9, Application US/09761636A
; Patent No. US20020065218A1

us-09-761-636a-6.open.rapb

Sun Sep 5 10:36:31 2004

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; GENERAL INFORMATION:
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 96
; TYPE: PRT
; ORGANISM: Homo sapiens
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues of Vall01-Pro196 of VEGF-D
US-09-761-636A-1

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Query Match      100.0%; Score 46; DB 9; Length 96;
Best Local Similarity 100.0%; Pred. No. 0.88;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY      1 CNEESLIC 8
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DB      46 CNEESLIC 53

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RESULT 5

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US-09-956-095-3
; Sequence 3, Application US/09956095
; Patent No. US20020102260A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steven A.
; TITLE OF INVENTION: METHODS FOR TREATING NEOPLASTIC DISEASE CHARACTERIZED BY
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR D EXPRESSION, FOR SCREENING
; TITLE OF INVENTION: FOR NEOPLASTIC DISEASE OR METASTATIC RISK AND FOR MAINTAINING
; TITLE OF INVENTION: VASCULARIZATION OF TISSUE
; FILE REFERENCE: 1064/48666PC
; CURRENT APPLICATION NUMBER: US/09/956,095
; CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 09/796,714
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/234,196
; PRIOR FILING DATE: 2000-09-20
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
; OTHER INFORMATION:
US-09-956-095-3

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Query Match      100.0%; Score 46; DB 9; Length 109;
Best Local Similarity 100.0%; Pred. No. 1;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY      1 CNEESLIC 8
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DB      54 CNEESLIC 61

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RESULT 6

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US-09-219-345A-1
; Sequence 1, Application US/09219345A
; Patent No. US2002012722A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; TITLE OF INVENTION: EXPRESSION VECTORS AND CELL LINES EXPRESSING VASCULAR

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; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 9
; LENGTH: 9
; TYPE: PRT
; ORGANISM: Homo sapiens
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues Vall01-Thr173 of VEGF-D
US-09-761-636A-3

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QY      1 CNEESLIC 8
        |||||
DB      2 CNEESLIC 9

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RESULT 3

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US-09-761-636A-3
; Sequence 3, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 3
; LENGTH: 73
; TYPE: PRT
; ORGANISM: Homo sapiens
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues Vall01-Thr173 of VEGF-D
US-09-761-636A-3

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Query Match      100.0%; Score 46; DB 9; Length 73;
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QY      1 CNEESLIC 8
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DB      46 CNEESLIC 53

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RESULT 4

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US-09-761-636A-1
; Sequence 1, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc

```

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; TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR D, AND METHOD OF TREATING
; TITLE OF INVENTION: MELANOMAS
; FILE REFERENCE: 1064/44385 Marc ACHEN
; CURRENT APPLICATION NUMBER: US/09/219,345A
; CURRENT FILING DATE: 1998-12-23
; PRIOR APPLICATION NUMBER: AU PP 1131
; PRIOR FILING DATE: 1997-12-24
; PRIOR APPLICATION NUMBER: US 60/087,392
; PRIOR FILING DATE: 1998-05-29
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-219-345A-1

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Best Local Similarity 100.0%; Pred. No. 1;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
      |||||
Db      54 CNEESLIC 61

RESULT 7
US-10-779-731-1
; Sequence 1, Application US/10779731
; Publication No. US20040141917A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steve A.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/10/779,731
; CURRENT FILING DATE: 2004-02-18
; PRIOR APPLICATION NUMBER: US/10/100,037
; PRIOR FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: 09/469,186
; PRIOR FILING DATE: 1999-12-21
; PRIOR APPLICATION NUMBER: 60/113,254
; PRIOR FILING DATE: 1998-12-21
; PRIOR APPLICATION NUMBER: 60/134,556
; PRIOR FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-779-731-1

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Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
      |||||
Db      54 CNEESLIC 61

RESULT 8
US-10-352-153-8
; Sequence 8, Application US/10352153
; Publication No. US20030211101A1
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stackler, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF

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; TITLE OF INVENTION: VIRUS NZ2 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; CURRENT APPLICATION NUMBER: US/10/352,153
; CURRENT FILING DATE: 2003-01-28
; PRIOR APPLICATION NUMBER: US/09/431,888A
; PRIOR FILING DATE: 1999-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,689
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,800
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-352-153-8

Query Match      100.0%; Score 46; DB 12; Length 197;
Best Local Similarity 100.0%; Pred. No. 1.8;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
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Db      70 CNEESLIC 77

RESULT 9
US-10-044-622-1
; Sequence 1, Application US/10044622
; Publication No. US2002015538A1
; GENERAL INFORMATION:
; APPLICANT: Bandman, Olga
; APPLICANT: Goli, Surya K.
; APPLICANT: Murty, Lynn E.
; TITLE OF INVENTION: NOVEL ENDOTHELIAL GROWTH
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/044,622
; FILING DATE: 09-Jan-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/788,812
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Billings, Lucy J.
; REGISTRATION NUMBER: 36,749
; REFERENCE/DOCKET NUMBER: PF-0185 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-845-4166
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 280 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; IMMEDIATE SOURCE:
; LIBRARY: LUNGAST01

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us-09-761-636a-6.open.rapb

Sun Sep 5 10:36:31 2004

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; CLONE: 873352
; SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-10-044-622-1
Query Match 100.0%; Score 46; DB 13; Length 280;
Best Local Similarity 100.0%; Pred. No. 2.6; 0; Indels 0; Gaps 0;
Matches 8; Conservative 0; Mismatches 0;

QY 1 CNEESLIC 8
Db 146 CNEESLIC 153

RESULT 10
US-10-274-953-3
; Sequence 3, Application US/10274953
; Publication No. US20030114658A1
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/274,953
; FILING DATE: 22-Oct-2002
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/296,275
; FILING DATE:
; APPLICATION NUMBER: 08/915,795
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 325 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: Human Breast
; SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-10-274-953-3
Query Match 100.0%; Score 46; DB 14; Length 325;
Best Local Similarity 100.0%; Pred. No. 3;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
Db 117 CNEESLIC 124

RESULT 11
US-10-161-694-3
; Sequence 3, Application US/10161694
; Publication No. US20030125537A1
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/161,694
; FILING DATE: 05-Jun-2002
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/296,275
; FILING DATE:
; APPLICATION NUMBER: 08/915,795
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 325 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: Human Breast
; SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-10-161-694-3
Query Match 100.0%; Score 46; DB 14; Length 325;
Best Local Similarity 100.0%; Pred. No. 3;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
Db 117 CNEESLIC 124

RESULT 12
US-09-956-095-2
; Sequence 2, Application US/09956095
; Patent No. US20020102260A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steven A.
; TITLE OF INVENTION: METHODS FOR TREATING NEOPLASTIC DISEASE CHARACTERIZED BY
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR D EXPRESSION, FOR SCREENING
; TITLE OF INVENTION: FOR NEOPLASTIC DISEASE OR METASTATIC RISK AND FOR MAINTAINING

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; TITLE OF INVENTION: VASCULARIZATION OF TISSUE
; FILE REFERENCE: 1064/48666PC
; CURRENT APPLICATION NUMBER: US/09/956,095
; CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 09/796,714
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/234,196
; PRIOR FILING DATE: 2000-09-20
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-956-095-2

Query Match      100.0%; Score 46; DB 9; Length 354;
Best Local Similarity 100.0%; Pred. No. 3.3;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
Db      146 CNEESLIC 153

RESULT 13
US-09-219-345A-11
; Sequence 11, Application US/09219345A
; Patent No. US20020127222A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; TITLE OF INVENTION: EXPRESSION VECTORS AND CELL LINES EXPRESSING VASCULAR
; TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR D, AND METHOD OF TREATING
; FILE REFERENCE: 1064/44385 Marc ACHEN
; CURRENT APPLICATION NUMBER: US/09/219,345A
; CURRENT FILING DATE: 1998-12-23
; PRIOR APPLICATION NUMBER: AU PP 1131
; PRIOR FILING DATE: 1997-12-24
; PRIOR APPLICATION NUMBER: US 60/087,392
; PRIOR FILING DATE: 1998-05-29
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-219-345A-11

Query Match      100.0%; Score 46; DB 9; Length 354;
Best Local Similarity 100.0%; Pred. No. 3.3;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
Db      146 CNEESLIC 153

RESULT 14
US-09-795-006A-119
; Sequence 119, Application US/09795006A
; Patent No. US20020151680A1
; GENERAL INFORMATION:
; APPLICANT: Alitalo et al
; TITLE OF INVENTION: MATERIALS AND METHODS INVOLVING HYBRID VASCULAR
; FILE REFERENCE: 28967/35977B
; CURRENT APPLICATION NUMBER: US/09/795,006A
; CURRENT FILING DATE: 2001-02-26
; PRIOR APPLICATION NUMBER: US 60/205,331
; PRIOR FILING DATE: 2000-05-18
; PRIOR APPLICATION NUMBER: US 60/185,205
; PRIOR FILING DATE: 2000-02-25

; NUMBER OF SEQ ID NOS: 175
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 119
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-006A-119

Query Match      100.0%; Score 46; DB 9; Length 354;
Best Local Similarity 100.0%; Pred. No. 3.3;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
Db      146 CNEESLIC 153

RESULT 15
US-09-375-248-6
; Sequence 6, Application US/09375248
; Publication No. US20030026759A1
; GENERAL INFORMATION:
; APPLICANT: Ferrell, Robert E.
; APPLICANT: Alitalo, Kari
; APPLICANT: Finegold, David N.
; APPLICANT: Karkkainen, Marika
; TITLE OF INVENTION: SCREENING AND THERAPY FOR LYMPHATIC DISORDERS INVOLVING
; TITLE OF INVENTION: THE FLT4 RECEPTOR TYROSINE KINASE (VEGFR-3)
; FILE REFERENCE: 28967/35255A
; CURRENT APPLICATION NUMBER: US/09/375,248
; CURRENT FILING DATE: 1999-08-16
; EARLIER APPLICATION NUMBER: PCT/US99/06133
; EARLIER FILING DATE: 1999-03-26
; NUMBER OF SEQ ID NOS: 28
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-375-248-6

Query Match      100.0%; Score 46; DB 10; Length 354;
Best Local Similarity 100.0%; Pred. No. 3.3;
Matches      8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
Db      146 CNEESLIC 153

Search completed: September 5, 2004, 10:29:18
Job time : 22.4646 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:55:30 ; Search time 7.11111 Seconds
(without alignments)
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Title: US-09-761-636A-6

Perfect score: 46

Sequence: 1 CNEESLIC 8

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Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	46	100.0	109	4	US-09-469-186-1
2	46	100.0	109	4	US-09-469-185-1
3	46	100.0	197	4	US-09-431-888-8
4	46	100.0	325	3	US-08-915-795-3
5	46	100.0	354	3	US-08-915-795-5
6	36	78.3	120	6	5194596-9
7	36	78.3	120	6	5219739-9
8	36	78.3	132	4	US-09-125-642C-15
9	36	78.3	132	4	US-09-431-888-11
10	36	78.3	133	4	US-09-431-888-2
11	36	78.3	164	6	5194596-17
12	36	78.3	164	6	5219739-17
13	36	78.3	164	6	5219739-18
14	36	78.3	190	6	5332671-3
15	36	78.3	321	3	US-08-915-795-9
16	36	78.3	358	3	US-08-915-795-8
17	33	71.7	146	3	US-08-586-039B-33
18	33	71.7	146	4	US-09-699-769-33
19	33	71.7	189	1	US-08-469-427A-15
20	33	71.7	190	2	US-08-569-063C-20
21	33	71.7	190	3	US-08-586-039B-31
22	33	71.7	190	4	US-09-699-769-31
23	33	71.7	214	3	US-08-586-039B-35
24	33	71.7	214	4	US-09-699-769-35
25	33	71.7	278	2	US-08-460-309-13
26	33	71.7	278	2	US-08-125-077-13
27	33	71.7	279	1	US-08-152-019A-29

28	33	71.7	1196	1	US-08-144-121-4
29	33	71.7	1196	2	US-08-735-893-4
30	33	71.7	1765	4	US-09-562-702A-16
31	33	71.7	1765	4	US-09-561-818A-16
32	33	71.7	1786	4	US-09-562-702A-14
33	33	71.7	1786	4	US-09-561-818A-14
34	33	71.7	1786	4	US-09-561-709B-9
35	32	69.6	12	3	US-08-742-243-43
36	32	69.6	12	3	US-08-742-243-44
37	32	69.6	12	3	US-08-742-243-45
38	32	69.6	65	4	US-09-244-583-12
39	32	69.6	109	3	US-08-691-794-3
40	32	69.6	110	4	US-09-392-932-11
41	32	69.6	110	4	US-09-574-708A-11
42	32	69.6	110	4	US-09-822-270-17
43	32	69.6	110	4	US-09-392-931-10
44	32	69.6	110	4	US-09-392-931-11
45	32	69.6	121	6	5194596-19

ALIGNMENTS

RESULT 1
US-09-469-186-1
; Sequence 1, Application US/09469186
; Patent No. 6383484
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/09/469,186
; CURRENT FILING DATE: 1999-12-21
; EARLIER APPLICATION NUMBER: 60/113,254
; EARLIER FILING DATE: 1998-12-21
; EARLIER APPLICATION NUMBER: 60/134,556
; EARLIER FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-469-186-1

Query Match 100.0%; Score 46; DB 4; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.33;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
Db 54 CNEESLIC 61

RESULT 2
US-09-469-185-1
; Sequence 1, Application US/09469185
; Patent No. 6531185
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steve A.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/09/469,185
; CURRENT FILING DATE: 1999-12-21
; EARLIER APPLICATION NUMBER: 60/113,254
; EARLIER FILING DATE: 1998-12-21
; EARLIER APPLICATION NUMBER: 60/134,556
; EARLIER FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1

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; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-469-185-1

Query Match      100.0%; Score 46; DB 4; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.33;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
Db      54 CNEESLIC 61

RESULT 3
US-09-431-888-8
; Sequence 8, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stackner, Stephen
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N72 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431.833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431.888A
; CURRENT FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800
; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-431-888-8

Query Match      100.0%; Score 46; DB 4; Length 197;
Best Local Similarity 100.0%; Pred. No. 0.59;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
Db      70 CNEESLIC 77

RESULT 4
US-08-915-795-3
; Sequence 3, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 354 amino acids
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 325 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: Human Breast
; US-08-915-795-3

Query Match      100.0%; Score 46; DB 3; Length 325;
Best Local Similarity 100.0%; Pred. No. 0.97;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CNEESLIC 8
Db      117 CNEESLIC 124

RESULT 5
US-08-915-795-5
; Sequence 5, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 354 amino acids
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; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: Human Lung
US-08-915-795-5

Query Match 100.0%; Score 46; DB 3; Length 354;
Best Local Similarity 100.0%; Pred. No. 1.1;
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db 146 CNEESLIC 153

RESULT 6
5194596-9
; PATENT NO. 5194596
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN
; C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
; GROWTH FACTOR
; NUMBER OF SEQUENCES: 32
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/450,883
; FILING DATE: 14-DEC-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO: 9;
; LENGTH: 120
5194596-9

Query Match 78.3%; Score 36; DB 6; Length 120;
Best Local Similarity 75.0%; Pred. No. 20;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db 60 CNEESLIC 67

RESULT 7
5219739-9
; PATENT NO. 5219739
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
; JOHN C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: DNA SEQUENCES ENCODING BVGEF120 AND
; BVGEF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN
; VASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVGEF120 AND BVGEF121
; NUMBER OF SEQUENCES: 40
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/559,041
; FILING DATE: 27-JUL-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 450,883
; FILING DATE: 14-DEC-1989
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO: 9;
; LENGTH: 120
5219739-9

Query Match 78.3%; Score 36; DB 6; Length 120;
Best Local Similarity 75.0%; Pred. No. 20;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db 60 CNEESLIC 67

RESULT 8
US-09-125-642C-15
; Sequence 15, Application US/09125642C
; Patent No. 6365393
; GENERAL INFORMATION:
; APPLICANT: BAYER AG
; TITLE OF INVENTION: Parapoxviruses Which Contain Foreign DNA, and
; Their Production and Their Use in Vaccines
; NUMBER OF SEQUENCES: 18
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bayer Corporation
; STREET: 100 Bayer Road
; CITY: Pittsburgh
; STATE: Pennsylvania
; COUNTRY: U.S.A.
; ZIP: 15205-9741
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30 (EPO)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/125,642C
; FILING DATE: 20-Aug-1998
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/EP97/00729,
; FILING DATE: 17-Feb-97
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 132 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Parapox ovis
; STRAIN: D1701 VEGF- Protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 15:
US-09-125-642C-15

Query Match 78.3%; Score 36; DB 4; Length 132;
Best Local Similarity 75.0%; Pred. No. 22;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
Db 70 CNEESLIC 77

RESULT 9
US-09-431-888-11
; Sequence 11, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stacker, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N22 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431,888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800

; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 132
; TYPE: PR1
; ORGANISM: Orf virus
; US-09-431-888-11

Query Match 78.3%; Score 36; DB 4; Length 132;
Best Local Similarity 75.0%; Pred. No. 22;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
||:|||||
Db 70 CNDESLEC 77

RESULT 10

US-09-431-888-2

; Sequence 2, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lynn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stackel, Stephen
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N22 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431,888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800
; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 133
; TYPE: PR1
; ORGANISM: Orf virus
; US-09-431-888-2

Query Match 78.3%; Score 36; DB 4; Length 133;
Best Local Similarity 75.0%; Pred. No. 22;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
||:|||||
Db 71 CNDESLEC 78

RESULT 11

5194596-17
; Patent No. 5194596
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN
; C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
; GROWTH FACTOR
; NUMBER OF SEQUENCES: 32
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/450,883
; FILING DATE: 14-DEC-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO:17:
; LENGTH: 164
5194596-17

Query Match 78.3%; Score 36; DB 6; Length 164;
Best Local Similarity 75.0%; Pred. No. 27;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
||:|||||
Db 60 CNDESLEC 67

RESULT 12

5219739-17
; Patent No. 5219739
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
; JOHN C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: DNA SEQUENCES ENCODING BVEGF120 AND
; HVEGF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN
; VASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVEGF120 AND HVEGF121
; NUMBER OF SEQUENCES: 40
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/559,041
; FILING DATE: 27-JUL-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 450,883
; FILING DATE: 14-DEC-1989
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO:17:
; LENGTH: 164
5219739-17

Query Match 78.3%; Score 36; DB 6; Length 164;
Best Local Similarity 75.0%; Pred. No. 27;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
||:|||||
Db 60 CNDESLEC 67

RESULT 13

5219739-18
; Patent No. 5219739
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
; JOHN C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: DNA SEQUENCES ENCODING BVEGF120 AND
; HVEGF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN
; VASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVEGF120 AND HVEGF121
; NUMBER OF SEQUENCES: 40
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/559,041
; FILING DATE: 27-JUL-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 450,883
; FILING DATE: 14-DEC-1989
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO:18:
; LENGTH: 164
5219739-18

Query Match 78.3%; Score 36; DB 6; Length 164;
Best Local Similarity 75.0%; Pred. No. 27;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CNEESLIC 8
||:|||||
Db 60 CNDESLEC 67

RESULT 14

5332671-3
; Patent No. 5332671

; APPLICANT: FERRARA, NAPOLEONE;LEUNG, DAVID W.H.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
; GROWTH FACTOR AND DNA ENCODING SAME
; NUMBER OF SEQUENCES: 15
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/389,722
; FILING DATE: 04-AUG-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 369,424
; FILING DATE: 21-JUN-1989
; APPLICATION NUMBER: 351,117
; FILING DATE: 12-MAY-1989
; SEQ ID NO:3:
; LENGTH: 190
; 5332671-3

Query Match 78.3%; Score 36; DB 6; Length 190;
Best Local Similarity 75.0%; Pred. No. 32;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CNEESLIC 8
||:|||||
Db 86 CNDESLEC 93

RESULT 15
US-08-915-795-9
; Sequence 9, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 321 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; TISSUE TYPE: Mouse Lung
US-08-915-795-9

Query Match 78.3%; Score 36; DB 3; Length 321;
Best Local Similarity 62.5%; Pred. No. 53;

Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
QY 1 CNEESLIC 8
||||| :|
Db 146 CNEEGVMC 153
Search completed: September 5, 2004, 10:21:56
Job time : 7.11111 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:47:29 ; Search time 8.44444 Seconds
(without alignments)
125.302 Million cell updates/sec

Title: US-09-761-636A-7

Perfect score: 61

Sequence: 1 CISVPLTSVPC 11

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 78:*

1: pir1:*

2: pir2:*

3: pir3:*

4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	39	63.9	151	2 P00506	hypothetical prote
2	39	63.9	169	2 A72466	hypothetical prote
3	39	63.9	207	2 I47061	collagenase inhibi
4	39	63.9	925	2 T29311	hypothetical prote
5	39	63.9	1062	2 T46444	hypothetical prote
6	38	62.3	324	2 T31992	hypothetical prote
7	38	62.3	503	2 S62018	probable membrane
8	38	62.3	616	2 T29234	hypothetical prote
9	38	62.3	1829	2 T34239	hypothetical prote
10	37	60.7	184	2 B96814	hypothetical prote
11	37	60.7	527	2 H85135	hypothetical prote
12	37	60.7	583	2 T70592	hypothetical prote
13	37	60.7	788	2 G64707	probable lpgB prot
14	37	60.7	788	2 E71813	cation-transportin
15	37	60.7	1787	2 T20160	probable component
16	36	59.0	165	2 B72727	hypothetical prote
17	36	59.0	174	2 JV0046	hypothetical prote
18	36	59.0	261	2 T16392	hypothetical 18K p
19	36	59.0	533	2 T46975	lysine-tRNA ligase
20	36	59.0	534	2 C64367	hypothetical prote
21	36	59.0	954	2 G71496	hypothetical prote
22	35	57.4	112	2 E72785	hypothetical prote
23	35	57.4	119	2 A59047	phospholipase A2 (
24	35	57.4	207	1 A35685	metalloproteinase
25	35	57.4	207	1 I46964	metalloproteinase
26	35	57.4	296	2 T34460	hypothetical prote
27	35	57.4	302	2 B81696	4-hydroxybenzoate
28	35	57.4	308	2 T29756	hypothetical prote
29	35	57.4	342	2 T25143	hypothetical prote

30	35	57.4	354	2 T31861	hypothetical prote
31	35	57.4	363	2 T02522	origin recognition
32	35	57.4	403	2 C75405	streptomycin biosy
33	35	57.4	410	2 T19995	hypothetical prote
34	35	57.4	457	2 B84725	probable glucosylt
35	35	57.4	537	2 T48599	hypothetical prote
36	35	57.4	756	2 T20109	hypothetical prote
37	35	57.4	790	2 T25095	hypothetical prote
38	35	57.4	970	2 D59435	Gem-interacting pr
39	35	57.4	1099	2 T16283	hypothetical prote
40	35	57.4	3014	1 JC5620	genome polyprotein
41	34.5	56.6	1246	2 T00826	hypothetical prote
42	34.5	56.6	1816	2 A84845	probable ABC trans
43	34	55.7	61	2 C90971	probable lipoprote
44	34	55.7	61	2 H90901	hypothetical 8.6K
45	34	55.7	76	2 JE0003	

ALIGNMENTS

RESULT 1

P00506

hypothetical protein 151 - fowlpox virus (fragment)

N:Alternate names: ORF3 protein

C:Species: fowlpox virus

C>Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 03-Nov-2000

C:Accession: P00506; S27935

R:Ogawa, R.; Calvert, J.G.; Yanagida, N.; Nazerian, K.

J. Gen. Virol. 74, 55-64, 1993

A:Title: Insertional inactivation of a fowlpox virus homologue of the vaccinia virus F12

A:Reference number: JQ1894; MUID:93139784; PMID:8380837

A:Accession: P00506

A:Molecule type: DNA

A:Residues: 1-151 <OGA>

A:Cross-references: GB:M88588; NID:g333522; PIDN:AAA47188.1; PID:g333525

A:Note: submitted to the EMBL Data Library, May 1992

Query Match 63.9%; Score 39; DB 2; Length 151;

Best Local Similarity 50.0%; Pred. No. 11;

Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CISVPLTSV 10

Db 90 CINIPIDSIP 99

RESULT 2

A72466

hypothetical protein APE2372 - Aeropyrum pernix (strain K1)

C:Species: Aeropyrum pernix

C>Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Aug-1999

C:Accession: A72466

R:Kawarabayashi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K.; Takah

awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; K

DNA Res. 6, 83-101, 1999

A:Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropyr

A:Reference number: A72450; MUID:99310339; PMID:10382966

A:Accession: A72466

A>Status: preliminary

A:Molecule type: DNA

A:Residues: 1-169 <KAW>

A:Cross-references: DDBJ:AP000064; NID:g5105945; PIDN:BAA81385.1; PID:dl045171; PID:g510

A:Experimental source: strain K1

C:Genetics:

A:Gene: APE2372

Query Match 63.9%; Score 39; DB 2; Length 169;

Best Local Similarity 60.0%; Pred. No. 12;

Matches 6; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy 1 CISVPLTSV 10

Db 90 CINIPIDSIP 99

Db 57 CIGIPVASVP 66

RESULT 3
I47061
collagenase inhibitor - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text_change 16-Jul-1999
C:Accession: I47061
R: Tanaka, T.; Andoh, N.; Takeya, T.; Sato, E.
Mol. Cell. Endocrinol. 83, 65-71, 1992
A: Title: Differential screening of ovarian cDNA libraries detected the expression of the
A: Reference number: I47061; MUID: 92201478; PMID: 1312961
A: Accession: I47061
A: Status: preliminary; translated from GB/EMBL/DBJ
A: Molecule type: mRNA
A: Residues: 1-207 <FAN>
A: Cross-references: GB:S96211; NID: G247729; PIDN: AAB21865.1; PID: G247730
C: Superfamily: metalloproteinase inhibitor

Query Match 63.9%; Score 39; DB 2; Length 207;
Best Local Similarity 54.5%; Pred. No. 15;
Matches 6; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 C1SVPLTSVPC 11
| | | | |
| | | | |
Db 150 CTVPFCTSIPT 160

RESULT 4
T29311
hypothetical protein F36D4.3 - Caenorhabditis elegans
C: Species: Caenorhabditis elegans
C: Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C: Accession: T29311
R: Pauley, A.; Gattung, S.
submitted to the EMBL Data Library, March 1996
A: Description: The sequence of C. elegans cosmid F36D4.
A: Reference number: Z20603
A: Accession: T29311
A: Status: preliminary; translated from GB/EMBL/DBJ
A: Molecule type: DNA
A: Residues: 1-925 <PAU>
A: Cross-references: EMBL:U53181; PIDN: AAA93485.1; GSPDB: GN00023; CESP: F36D4.3
A: Experimental source: strain Bristol N2; clone F36D4
C: Genetics:
A: Gene: CESP: F36D4.3
A: Map position: 5
A: Introns: 24/3; 56/2; 103/3; 187/1; 387/2; 429/3; 455/3; 516/1; 555/1; 782/2; 882/3

Query Match 63.9%; Score 39; DB 2; Length 925;
Best Local Similarity 50.0%; Pred. No. 64;
Matches 5; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

QY 2 ISVPLTSVPC 11
| | | | |
| | | | |
Db 2 VSLPMSNVPC 11

RESULT 5
T46444
hypothetical protein DKFPz434N1427.1 - human
C: Species: Homo sapiens (man)
C: Date: 04-Feb-2000 #sequence_revision 04-Feb-2000 #text_change 04-Feb-2000
C: Accession: T46444
R: Bloembergen, H.; Boecker, M.; Brandt, P.; Mewes, H.W.; Gassenhuber, J.; Wiemann, S.
submitted to the Protein Sequence Database, January 2000
A: Reference number: Z23032
A: Accession: T46444
A: Status: preliminary
A: Molecule type: mRNA
A: Residues: 1-1062 <AAA>
A: Cross-references: EMBL: AL137701

A: Experimental source: adult testis; clone DKFPz434N1427
C: Genetics:
A: Note: DKFPz434N1427.1

Query Match 63.9%; Score 39; DB 2; Length 1062;
Best Local Similarity 66.7%; Pred. No. 74;
Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 SVPLTSVPC 11
| | | | |
| | | | |
Db 25 SIPLSSTPC 33

RESULT 6
T31992
hypothetical protein C49D10.3 - Caenorhabditis elegans
C: Species: Caenorhabditis elegans
C: Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 21-Jan-2000
C: Accession: T31992
R: Henkhaus, J.; Wohldmann, P.; Beck, C.
submitted to the EMBL Data Library, July 1997
A: Description: The sequence of C. elegans cosmid C49D10.
A: Reference number: Z21108
A: Accession: T31992
A: Status: preliminary; translated from GB/EMBL/DBJ
A: Molecule type: DNA
A: Residues: 1-324 <HEN>
A: Cross-references: EMBL: AF016665; PIDN: AAC71178.1; GSPDB: GN00020; CESP: C49D10.3
A: Experimental source: strain Bristol N2; clone C49D10
C: Genetics:
A: Gene: CESP: C49D10.3
A: Map position: 2
A: Introns: 105/1
C: Superfamily: Caenorhabditis hypothetical protein C49G7.2

Query Match 62.3%; Score 38; DB 2; Length 324;
Best Local Similarity 54.5%; Pred. No. 34;
Matches 6; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 C1SVPLTSVPC 11
| | | | |
| | | | |
Db 70 CIGVPYLHPC 80

RESULT 7
S62018
probable membrane protein YDR539w - yeast (Saccharomyces cerevisiae)
N: Alternate names: hypothetical protein D3703.2
C: Species: Saccharomyces cerevisiae
C: Date: 10-Apr-1996 #sequence_revision 19-Apr-1996 #text_change 19-Apr-2002
C: Accession: S62018
R: Dietrich, F.S.; Mulligan, J.; Allen, E.; Araujo, R.; Aviles, E.; Berno, A.; Carpenter,
H.; Lin, D.; Mosedale, D.; Nakahara, K.; Nanath, A.; Oefner, P.; Oh, C.; Petel, F.X.; R
W.
submitted to the EMBL Data Library, December 1995
A: Reference number: S62017
A: Accession: S62018
A: Molecule type: DNA
A: Residues: 1-503 <DIE>
A: Cross-references: EMBL: U43834; NID: g1165292; PID: g1165294; GSPDB: GN00004; MIPS: YDR539
A: Experimental source: strain AB972
C: Genetics:
A: Gene: MIPS: YDR539w
A: Cross-references: SGD: S0002947
A: Map position: 4R
C: Superfamily: conserved hypothetical protein sll0936
C: Keywords: transmembrane protein
F: 210-226/Domain: transmembrane #status predicted <TMM>

Query Match 62.3%; Score 38; DB 2; Length 503;
Best Local Similarity 60.0%; Pred. No. 53;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

```

QY      2 ISVPLTSVPC 11
      115 ITVPSSAPC 124

RESULT 8
hypothetical protein F55G1.13 - Caenorhabditis elegans
C:Species: Caenorhabditis elegans
C>Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C:Accession: T29234
R:Muray, J.; Le, T.T.
submitted to the EMBL Data Library, May 1996
A:Description: The sequence of C. elegans cosmid F55G1.
A:Reference number: Z20591
A:Accession: T29234
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-616 <MUR>
A:Cross-references: EMBL:U58750; PIDN:AA00653.1; GSPDB:GN00022; CESP:F55G1.13
A:Experimental source: strain Bristol N2; clone F55G1
C:Genetics:
A:Gene: CESP.F55G1.13
A:Map position: 4
A:Introns: 98/1; 136/1; 230/1; 256/1; 363/1; 401/1; 443/1; 484/1; 528/2; 551/3

Query Match      62.3%; Score 38; DB 2; Length 616;
Best Local Similarity 54.5%; Pred. No. 65;
Matches 6; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY      1 C1SVPLTSVPC 11
      362 CVGNPCTSEPC 372

RESULT 9
T34239
hypothetical protein F26F12.7 - Caenorhabditis elegans
C:Species: Caenorhabditis elegans
C>Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 29-Oct-1999
C:Accession: T34239
R:Wilson, R.; Bentley, D.; Gattung, S.
submitted to the EMBL Data Library, April 1996
A:Description: The sequence of C. elegans cosmid F26F12.
A:Reference number: Z21493
A:Accession: T34239
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-1829 <WIL>
A:Cross-references: EMBL:U55373; PIDN:AAC25894.1; GSPDB:GN00023; CESP:F26F12.7
A:Experimental source: strain Bristol N2; clone F26F12
C:Genetics:
A:Gene: CESP.F26F12.7
A:Map position: 5
A:Introns: 110/3; 441/3; 801/2; 1244/3; 1693/2; 1784/1

Query Match      62.3%; Score 38; DB 2; Length 1829;
Best Local Similarity 70.0%; Pred. No. 1.9e+02;
Matches 7; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 C1SVPLTSVP 10
      343 CIDPPLTEVP 352

RESULT 10
B96814
hypothetical protein T30F21.11 [imported] - Arabidopsis thaliana
C:Species: Arabidopsis thaliana (mouse-ear cross)
C>Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001
C:Accession: B96814
R:Rheologias, A.; Ecker, J.R.; Palm, C.J.; Kaul, S.; White, O.; Alonso, J.;
Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.;

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ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A:Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.
C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali,
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A:Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon,
ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A:Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A:Reference number: A86141; MUID:21016719; PMID:11130712
A:Accession: B96914
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-184 <STO>
A:Cross-references: GB:AE005173; NID:g4836878; PIDN:AA030581.1; GSPDB:GN00141
C:Genetics:
A:Gene: T30F21.11
A:Map position: 1

Query Match      60.7%; Score 37; DB 2; Length 184;
Best Local Similarity 85.7%; Pred. No. 30;
Matches 6; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY      5 PLTSVPC 11
      150 PLTAVPC 156

RESULT 11
H85135
hypothetical protein AT4G12650 [imported] - Arabidopsis thaliana
C:Species: Arabidopsis thaliana (mouse-ear cross)
C>Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 16-Feb-2001
C:Accession: H85135
R:anonymous, The European Union Arabidopsis Genome Sequencing Consortium, The Cold Spring
Nature 402, 769-777, 1999
A:Title: Sequence and analysis of chromosome 4 of the plant Arabidopsis thaliana.
A:Reference number: A85001; MUID:20083488; PMID:10617198
A:Accession: H85135
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-527 <STO>
A:Cross-references: GB:NC_001268; NID:g7267967; PIDN:CAB78308.1; GSPDB:GN00140
C:Genetics:
A:Gene: AT4G12650
A:Map position: 4

Query Match      60.7%; Score 37; DB 2; Length 527;
Best Local Similarity 100.0%; Pred. No. 83;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 C1SVPLT 7
      344 C1SVPLT 350

RESULT 12
F70592
probable lpqB protein - Mycobacterium tuberculosis (strain H37RV)
C:Species: Mycobacterium tuberculosis
C>Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 22-Oct-1999
C:Accession: F70592
R:Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Gordon, S.
; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Holroyd, S.
Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
Nature 393, 537-544, 1998
A:Authors: Sgares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.
A:Title: Deciphering the biology of Mycobacterium tuberculosis from the complete genome
A:Reference number: A70500; MUID:98295987; PMID:9634230
A:Accession: F70592
A:Status: preliminary; nucleic acid sequence not shown; translation not shown
A:Molecule type: DNA
A:Residues: 1-583 <COL>
A:Cross-references: GB:Z95121; GB:AL123456; NID:g3261742; PIDN:CAB08345.1; PID:e314477;

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A;Experimental source: strain H37Rv
C;Genetics:
A;Gene: lpqB

Query Match 60.7%; Score 37; DB 2; Length 583;
Best Local Similarity 70.0%; Pred. No. 92;
Matches 7; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 10
||||| : |||

Db 16 CASVPSTAP 25

RESULT 13

G64707
cation-transporting ATPase, P-type - Helicobacter pylori (strain 26695)
C;Species: Helicobacter pylori
C;Date: 09-Aug-1997 #sequence_revision 09-Aug-1997 #text_change 11-Jan-2000
C;Accession: G64707
R;Tomb, J.F.; White, O.; Kerlavage, A.R.; Clayton, R.A.; Sutton, G.G.; Fleischmann, R.D.; Peterson, S.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; McKenney, J.D.; Kelley, J.M.; Cotton, M.D.; Weidman, J.M.; Fujii, C.; Bowman, C.; Watthey, L.; Nature 388, 539-547, 1997
A;Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser, C.
A;Title: The complete genome sequence of the gastric pathogen Helicobacter pylori.
A;Reference number: A64520; MUID:97394467; PMID:952185
A;Accession: G64707
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-788 <TOM>
A;Cross-references: GB:AE000648; GB:AE000511; NID:92314670; PIDN:AAD08539.1; PID:G231467
C;Superfamily: Enterococcus copper-transporting ATPase copA; ATPase nucleotide-binding domain F;218-547/Domain: ATPase transduction domain homology <ATP>
F;612-750/Domain: ATPase nucleotide-binding domain homology <ATN>

Query Match 60.7%; Score 37; DB 2; Length 788;
Best Local Similarity 63.6%; Pred. No. 1.2e+02;
Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 11

Db 456 CISVLVISCPC 466
||||| : |||

RESULT 14

E71813
probable component of cation transport for cbb3-type oxidase - Helicobacter pylori (strain J99)
C;Species: Helicobacter pylori
A;Variety: strain J99
C;Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 21-Jan-2000
C;Accession: E71813
R;Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith, D.R.; Ives, C.; Gibson, R.; Merberg, D.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; Vovis, G.F.; Nature 397, 176-180, 1999
A;Title: Genomic sequence comparison of two unrelated isolates of the human gastric pathogen Helicobacter pylori.
A;Reference number: A71800; MUID:99120557; PMID:9923682
A;Accession: E71813
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-788 <ARN>
A;Cross-references: GB:AE001561; GB:AE001439; NID:94156000; PIDN:AAD06962.1; PID:9415600
A;Experimental source: strain J99
C;Genetics:
A;Gene: fixI
C;Superfamily: Enterococcus copper-transporting ATPase copA; ATPase nucleotide-binding domain F;612-750/Domain: ATPase nucleotide-binding domain homology <ATN>

Query Match 60.7%; Score 37; DB 2; Length 788;
Best Local Similarity 63.6%; Pred. No. 1.2e+02;
Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 11

||||| : |||

Db 456 CISVLVISCPC 466

RESULT 15

T20160
hypothetical protein T14G8.1 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 18-Feb-2000
C;Accession: T20160; T24924
R;McMurray, A.
submitted to the EMBL Data Library, November 1995
A;Reference number: Z19231
A;Accession: T20160
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-1787 <W11>
A;Cross-references: EMBL:Z67881; PIDN:CAA91798.1; GSPDB:GN000028; CESP:T14G8.1
A;Experimental source: clone C52G5
R;Matthews, P.
submitted to the EMBL Data Library, November 1995
A;Reference number: Z19955
A;Accession: T24924
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-1787 <W12>
A;Cross-references: EMBL:Z67884; PIDN:CAA91810.1; GSPDB:GN000028; CESP:T14G8.1
A;Experimental source: clone T14G8
C;Genetics:
A;Gene: CESP:T14G8.1
A;Map position: X
A;Introns: 112/3; 453/3; 597/3; 815/2; 1258/3; 1682/2; 1709/3; 1764/1

Query Match 60.7%; Score 37; DB 2; Length 1787;
Best Local Similarity 60.0%; Pred. No. 2.8e+02;
Matches 6; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 10

||||| : |||

Db 354 CIDPPLTEIP 363

Search completed: September 5, 2004, 10:01:17
Job time : 9.44444 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:38:39 ; Search time 5 seconds
(without alignments)
114.554 Million cell updates/sec

Title: US-09-761-636A-7
Perfect score: 61
Sequence: 1 C1SVPLTSVPC 11

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_42:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB	ID	Description
1	43	70.5	326	1	VEGD_RAT	O35251 rattus norv
2	43	70.5	354	1	VEGD_HUMAN	O43915 homo sapien
3	43	70.5	358	1	VEGD_MOUSE	P97946 mus musculu
4	39	63.9	207	1	TIM1_PIG	P35624 sus scrofa
5	39	63.9	451	1	V110_FOWPV	P36700 fowlpox vir
6	39	63.9	1723	1	A1M1_HUMAN	O9y4k1 homo sapien
7	38	62.3	503	1	YD39_YEAST	Q03034 saccharomyc
8	38	62.3	662	1	T982_MOUSE	P58021 mus musculu
9	38	62.3	663	1	T982_MOUSE	Q99805 homo sapien
10	37	60.7	892	1	CHD3_DROME	O16102 drosophila
11	37	60.7	1787	1	CHD3_CAEEL	Q25116 caenorhabdi
12	36	59.0	65	1	BB12_SCHCO	P78743 schizophyll
13	36	59.0	337	1	C512_HUMAN	Q9p296 homo sapien
14	36	58.0	530	1	SYK_METJA	Q57959 methanococc
15	36	58.0	533	1	SYK_METMB	O30522 methanococc
16	36	59.0	613	1	ADAS_TRYBP	O97157 trypanosoma
17	36	59.0	895	1	STNB_MOUSE	Q8bz60 mus musculu
18	36	59.0	905	1	STNB_HUMAN	Q8xw9 homo sapien
19	35	57.4	77	1	COMA_CONMA	Q9tw19 conus magus
20	35	57.4	207	1	TIM1_BOVIN	P20414 bos taurus
21	35	57.4	207	1	TIM1_SHEEP	P50122 ovis aries
22	35	57.4	296	1	RPC6_CAEEL	P91529 caenorhabdi
23	35	57.4	363	1	ORC2_ARATH	Q38899 arabidopsis
24	35	57.4	756	1	K6PF_CAEEL	Q27483 caenorhabdi
25	35	57.4	773	1	DGR8_HUMAN	Q8wyq5 homo sapien
26	35	57.4	1041	1	Q91wf3	Q91wf3 mus musculu
27	35	57.4	1077	1	CXA4_MOUSE	Q38477 bacterioph
28	34	55.7	76	1	VG06_BPMU	P55773 homo sapien
29	34	55.7	120	1	SY23_HORSE	O02722 equus cabal
30	34	55.7	207	1	TIM1_HORSE	P23889 escherichia
31	34	55.7	258	1	KPM1_ECOLI	P24584 escherichia
32	34	55.7	258	1	KPM2_ECOLI	P16115 thermotoga
33	34	55.7	319	1	LDH_THEMEA	

34	34	55.7	323	1	TKRA_ERWHE	P58000 erwinia her
35	34	55.7	327	1	NASI_HORVU	Q9zqv9 hordeum vul
36	34	55.7	330	1	OBH6_HUMAN	Q8ngc7 homo sapien
37	34	55.7	349	1	YHHT_ECOLI	P37622 escherichia
38	34	55.7	651	1	TDR3_HUMAN	O3h7e2 homo sapien
39	34	55.7	753	1	TDR6_HUMAN	O60522 homo sapien
40	34	55.7	837	1	MUCL_RAT	P98089 rattus norv
41	34	55.7	1097	1	EX5C_MYCTU	P96921 mycobacteri
42	34	55.7	1233	1	VLI_REOVD	P15024 reovirus (t
43	34	55.7	1426	1	CUT2_MOUSE	P70298 mus musculu
44	34	55.7	1816	1	LMA4_HUMAN	O16363 homo sapien
45	34	55.7	2142	1	BAT2_HUMAN	P48634 homo sapien

ALIGNMENTS

RESULT 1
VEGD_RAT
ID VEGD_RAT STANDARD; PRT; 326 AA.
AC O35251;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF).
DE growth factor) (FIGF).
GN FIGF OR VEGFD.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Rattus.
OX NCBI_TaxID=10116;
RN [1]_TaxID=10116;
RP SEQUENCE FROM N.A.
RC STRAIN=Sprague-Dawley;
RA Yamada Y., Hirata Y., Nezu J., Shimane M.;
RL Submitted (JUL-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-3 (Flt4) receptor (By similarity).
CC -!- SUBUNIT: Homodimer; non-covalent and antiparallel (By similarity).
CC -!- SUBCELLULAR LOCATION: Secreted (By similarity).
CC -!- PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDS) bound by non-covalent interactions (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.

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EMBL; AF014827; AAB66557.1; -
HSSP; P15692; 1VPP.
DR InterPro; IPR004153; CXCXC repeat.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXCXC; 1.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF 1; 1.
DR PROSITE; PS0278; PDGF 2; 1.
KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat; Cleavage on pair of basic residues; Multigene family.

FT SIGNAL 1 21 POTENTIAL.
 FT PROPEP 22 93 POTENTIAL.
 FT CHAIN 94 210 VASCULAR ENDOTHELIAL GROWTH FACTOR D.
 FT PROPEP 211 326 POTENTIAL.
 FT DOMAIN 227 317 4 X 16 AA REPEATS OF C-X(10)-C-X-C-X(1,3)-C.
 FT REPEAT 227 242 1 (APPROXIMATE).
 FT REPEAT 263 278 2.
 FT REPEAT 282 298 3.
 FT REPEAT 306 317 4 (INCOMPLETE).
 FT DISULFID 116 158 BY SIMILARITY.
 FT DISULFID 147 194 BY SIMILARITY.
 FT DISULFID 151 196 BY SIMILARITY.
 FT DISULFID 141 141 INTERCHAIN (BY SIMILARITY).
 FT DISULFID 150 150 INTERCHAIN (BY SIMILARITY).
 FT CARBOHYD 160 160 N-LINKED (GLCNAC. . .) (POTENTIAL).
 FT CARBOHYD 190 190 N-LINKED (GLCNAC. . .) (POTENTIAL).
 FT CARBOHYD 292 292 N-LINKED (GLCNAC. . .) (POTENTIAL).
 SQ SEQUENCE 326 AA; 37112 MW; 1261AFA373596C00 CRC64;
 Query Match 70.5%; Score 43; DB 1; Length 326;
 Best Local Similarity 100.0%; Pred. No. 1.4;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 2 ISVPLTSVP 10
 DB 173 ISVPLTSVP 181
 RESULT 2
 VEGD_HUMAN STANDARD; PRT; 354 AA.
 ID VEGD_HUMAN
 AC O43915;
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF).
 DE FIGF OR VEGFD.
 GN Homo sapiens (Human).
 OS Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Lung;
 RX MEDLINE=97349118; PubMed=9205122;
 RA Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
 RT "Molecular cloning of a novel vascular endothelial growth factor, VEGF-D";
 RL Genomics 42:483-488 (1997).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Lung;
 RX MEDLINE=98140120; PubMed=9479493;
 RA Rocchigiani M., Lestingi M., Iuddi A., Orlandini M., Franco B., Rossi E., Ballabio A., Zuffardi O., Oliviero S.;
 RT "Human FIGF: cloning, gene structure, and mapping to chromosome Xp22.1 between the FIGA and the GRPR genes";
 RL Genomics 47:207-216 (1998).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=98118549; PubMed=9435229;
 RA Achen M.G., Jeltsch M., Kukk E., Mäkinen T., Vitali A., Wilks A.F., Allitalo K., Stacker S.A.;
 RT "Vascular endothelial growth factor D (VEGF-D) is a ligand for the tyrosine kinases VEGF receptor 2 (Flk1) and VEGF receptor 3 (Flt4).";
 RL Proc. Natl. Acad. Sci. U.S.A. 95:548-553 (1998).
 RN [4]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Lung;
 RX MEDLINE=22388257; PubMed=12477932;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., RA Stapleton M., Soares M.B., Bonaldi M.F., Casavant T.L., Scheetz T.E., RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J., RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., RA Villalón D.K., Muzny K.C., Sodergren E.J., Lu X., Gibbs R.A., RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A., RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., RA Botterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., RA Schnerich A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences";
 RT Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
 RN [5]
 RP PROCESSING, AND SEQUENCE OF 89-94; 100-105 AND 206-213.
 RX MEDLINE=20011413; PubMed=10542248;
 RA Stacker S.A., Stenvers K.L., Caesar C., Vitali A., Domagala T., RA Nice E.C., Roufail S., Simpson R.J., Moritz R., Karpanen T., RA Allitalo K., Achen M.G.;
 RT "Biosynthesis of vascular endothelial growth factor-D involves proteolytic processing which generates non-covalent homodimers";
 RL J. Biol. Chem. 274:32127-32136 (1999).
 CC -!- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (Flk1) and VEGFR-3 (Flt4) receptors.
 CC -!- SUBUNIT: Homodimer; non-covalent.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- TISSUE SPECIFICITY: Highly expressed in lung, heart, small intestine and fetal lung, and at lower levels in skeletal muscle, colon, and pancreas.
 CC -!- PM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions.
 CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
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 CC EMBL; D89630; BAA24264.1; --
 CC EMBL; Y12863; CAA73370.1; --
 CC EMBL; Y12864; CAA73371.1; --
 CC EMBL; Y12865; CAA73371.1; JOINED.
 CC EMBL; Y12866; CAA73371.1; JOINED.
 CC EMBL; Y12867; CAA73371.1; JOINED.
 CC EMBL; Y12868; CAA73371.1; JOINED.
 CC EMBL; Y12869; CAA73371.1; JOINED.
 CC EMBL; Y12870; CAA73371.1; JOINED.
 CC EMBL; AJ000185; CAA03942.1; --
 CC EMBL; BC027948; AAH27948.1; --
 CC HSSP; P15692; 1VPP.
 CC Genew; HGNC:3708; FIGF.
 CC MIM; 300091; --
 CC GO; GO:0005615; C:extracellular space; TAS.
 CC GO; GO:0005161; F:platelet-derived growth factor receptor bin. .; TAS.
 CC GO; GO:0005102; F:receptor binding; TAS.

DR GO; GO:0008284; P:Positive regulation of cell proliferation; TAS.
 DR InterPro; IPR004153; CXKC repeat.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF03128; CXKC; 3.
 DR Pfam; PF00341; PDGF; 1.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS00278; PDGF_2; 1.
 KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
 KW Cleavage on pair of basic residues; Multigene family.
 FT SIGNAL 21
 FT CHAIN 89
 FT PROPEP 206
 FT DOMAIN 222
 FT REPEAT 222
 FT REPEAT 258
 FT REPEAT 277
 FT REPEAT 301
 FT DISULFID 111
 FT DISULFID 142
 FT DISULFID 146
 FT DISULFID 136
 FT DISULFID 145
 FT CARBOHYD 155
 FT CARBOHYD 185
 FT CARBOHYD 287
 SQ SEQUENCE 354 AA; 40444 MW; 20480769D7J5173E CRC64;
 Query Match 70.5%; Score 43; DB 1; Length 354;
 Best Local Similarity 100.0%; Pred. No. 1.5;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 2 ISVPLTSVP 10
 DB 168 ISVPLTSVP 176
 RESULT 3
 VEGD_MOUSE STANDARD; PRT; 358 AA.
 AC P97946;
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF).
 GN FIGF OR VEGFD.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RP [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Fibroblast;
 RX MEDLINE=97030254; PubMed=8876195;
 RA Orlandini M., Marconcini L., Ferruzzi R., Oliviero S.;
 RT "Identification of a c-fos-induced gene that is related to the platelet-derived growth factor/vascular endothelial growth factor family";
 RL Proc. Natl. Acad. Sci. U.S.A. 93:11675-11680 (1996).
 RN [2]
 RN SEQUENCE FROM N.A.
 RC TISSUE=Lung;
 RX MEDLINE=97349118; PubMed=9205122;
 RA Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
 RT "Molecular cloning of a novel vascular endothelial growth factor, VEGF-D";
 RL Genomics 42:483-488 (1997).
 RN [3]
 RP DEVELOPMENTAL STAGE.

RX MEDLINE=98288130; PubMed=9622638;
 RA Avantaggiato V., Orlandini M., Accompa D., Oliviero S., Simeone A.;
 RT "Embryonic expression pattern of the murine figf gene, a growth factor belonging to platelet-derived growth factor/vascular endothelial growth factor family.";
 RL Mech. Dev. 73:221-224 (1998).
 RN [4]
 RP RECEPTOR SPECIFICITY.
 RX MEDLINE=21276411; PubMed=11279005;
 RA Baldwin M.E., Catmel B., Nice E.C., Roufail S., Hall N.E.,
 RA Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;
 RT "The specificity of receptor binding by vascular endothelial growth factor-d is different in mouse and man.";
 RL J. Biol. Chem. 276:19166-19171 (2001).
 CC -!- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-3 (Flt4) receptor.
 CC -!- SUBUNIT: Homodimer; non-covalent and antiparallel.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- TISSUE SPECIFICITY: Highly expressed in fetal and adult lung.
 CC -!- DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in several body structures and organs of the embryo such as limb buds, acoustic ganglion, teeth, heart, anterior pituitary as well as lung and kidney mesenchyme, liver, derma, and periosteum of the vertebral column.
 CC -!- INDUCTION: By the transcription factor c-fos.
 CC -!- PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions (By similarity).
 CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
 CC -----
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 CC -----
 DR EMBL; X95572; CAA67892.1; -;
 DR EMBL; D89628; BAAL4002.1; -;
 DR HSSP; P15692; LVPP.
 DR PMMA-2DPAGE; P97946; -;
 DR MGD; MGI:108037; Figf.
 DR GO; GO:0005576; C:extracellular; IDA.
 DR GO; GO:0008083; F:growth factor activity; IDA.
 DR GO; GO:0005515; F:protein binding; IPI.
 DR GO; GO:0008283; P:cell proliferation; IDA.
 DR InterPro; IPR004153; CXKC_repeat.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF03128; CXKC; 2.
 DR Pfam; PF00341; PDGF; 1.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS00278; PDGF_2; 1.
 KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
 KW Cleavage on pair of basic residues; Multigene family.
 FT SIGNAL 1 21
 FT PROPEP 22 93
 FT CHAIN 94 210
 FT PROPEP 211 358
 FT DOMAIN 227 323
 FT REPEAT 227 242
 FT REPEAT 263 278

DR PIR; I47061; I47061.
DR HSP; P01033; IUEA.
DR InterPro; IPR001820; TIMP_like.
DR InterPro; IPR008993; TIMP_1.
DR Pfam; PF00965; TIMP; 1.
DR SMART; SM00206; NTR; 1.
DR PROSITE; PS00189; NTR; 1.
DR PROSITE; PS00288; TIMP; 1.
DR Glycoprotein; Metalloprotease inhibitor; Erythrocyte maturation;
KW Signal.
FT SIGNAL 1 23 BY SIMILARITY.
FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
FT DOMAIN 24 147 NTR.
FT DISULFID 24 93 BY SIMILARITY.
FT DISULFID 26 122 BY SIMILARITY.
FT DISULFID 36 147 BY SIMILARITY.
FT DISULFID 150 197 BY SIMILARITY.
FT DISULFID 155 160 BY SIMILARITY.
FT DISULFID 168 189 BY SIMILARITY.
FT CARBOHYD 53 53 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 101 101 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CONFLICT 34 34 A -> P (IN REF. 2).
FT CONFLICT 37 37 S -> N (IN REF. 3).
FT CONFLICT 41 41 V -> F (IN REF. 2).
FT CONFLICT 59 59 K -> Q (IN REF. 1).
FT CONFLICT 86 86 T -> A (IN REF. 3).
FT CONFLICT 141 142 EI -> KT (IN REF. 3).
SQ SEQUENCE 207 AA; 23098 MW; B04895846EB56BD0 CRC64;
Query Match 63.9%; Score 39; DB 1; Length 207;
Best Local Similarity 54.5%; Pred. No. 4.7;
Matches 6; Conservative 1; Mismatches 4; Indels 0; Gaps 0;
Qy 1 CISVPLTSVPC 11
Db 150 CTVPFCTSIPT 160
RESULT 5
VIL10_FOWPV STANDARD; PRT; 451 AA.
AC P36700; Q9J5B2;
DT 01-JUN-1994 (Rel. 29, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 16-OCT-2001 (Rel. 40, Last annotation update)
DE Protein FV110.
GN FV110.
OS Fowlpox virus (FPV).
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Avipoxvirus.
OX NCBI_TaxID=10261;
OX [1]
RN SEQUENCE FROM N.A.
RP MEDLINE=20193820; PubMed=10729156;
RX Afonso C.L., Tulman E.R., Lu Z., Zsak L., Kutish G.F., Rock D.L.;
RA "The genome of fowlpox virus";
RT J. Virol. 74:3815-3831(2000).
RL [2]
RN SEQUENCE OF 1-151 FROM N.A.
RP MEDLINE=93139784; PubMed=8380837;
RX Ogawa R., Calvert J.G., Yanagida N., Nazerian K.;
RA "Insertional inactivation of a fowlpox virus homologue of the
RT vaccinia virus F12L gene inhibits the release of enveloped virions.";
RL J. Gen. Virol. 74:55-64(1993)
CC -!- SIMILARITY: BELONGS TO THE POXVIRUSES F11 FAMILY.
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FT REPEAT 282 298 3.
FT REPEAT 306 323 4.
FT DISULFID 116 158 BY SIMILARITY.
FT DISULFID 147 194 BY SIMILARITY.
FT DISULFID 151 196 BY SIMILARITY.
FT DISULFID 141 141 INTERCHAIN (BY SIMILARITY).
FT DISULFID 150 150 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 160 160 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 190 190 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 292 292 N-LINKED (GLCNAC. . .) (POTENTIAL).
SQ SEQUENCE 358 AA; 40908 MW; 6636B17BF07037C CRC64;
Query Match 70.5%; Score 43; DB 1; Length 358;
Best Local Similarity 100.0%; Pred. No. 1.5;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 2 ISVPLTSVP 10
Db 173 ISVPLTSVP 181
RESULT 4
TIM1_PIG STANDARD; PRT; 207 AA.
AC P35624; Q9TTB9;
DT 01-JUN-1994 (Rel. 29, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Metalloprotease inhibitor 1 precursor (TIMP-1).
GN TIMP1.
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX NCBI_TaxID=9823;
OX [1]
RN SEQUENCE FROM N.A.
RP SEQUENCE=Ovary;
RC TISSUE=Ovary;
RX MEDLINE=92201478; PubMed=1312961;
RA Tanaka T., Andoh N., Takeya T., Sato E.;
RT "Differential screening of ovarian cDNA libraries detected the
RT expression of the porcine collagenase inhibitor gene in functional
RT corpora lutea";
RL Mol. Cell. Endocrinol. 83:65-71(1992).
RN [2]
RP SEQUENCE OF 34-195 FROM N.A.
RA Wang J.Y., Baer A.E., Kraus V.B., Setton L.A.;
RT "Gene expression level of mmp3 and Timpi in intervertebral disc.";
RL Submitted (NOV-1999) to the EMBL/GenBank/DBJ databases.
RP [3]
RP SEQUENCE OF 37-144 FROM N.A.
RC TISSUE=Skin;
RA Wang J.F., Boykiw R.H., Reno C.R., Hart D.A., Olson M.E.;
RT "Cloning and sequencing of porcine TIMPs";
RL Submitted (JUN-1999) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Complexes with metalloproteinases (such as collagenases)
CC and irreversibly inactivates them.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- PTM: The activity of TIMP1 is dependent on the presence of
CC disulfide bonds.
CC -!- SIMILARITY: Belongs to the TIMP family.
CC -!- SIMILARITY: Contains 1 NTR domain.
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CC -----
DR EMBL; AF198100; AAF44454.1; -.
DR EMBL; M88588; AAA47188.1; -.
DR PIR; PQ0506; PQ0506.
DR InterPro; IPR007027; Pox_F11.
DR Pfam; PF04943; Pox_F11; 1.
SQ SEQUENCE 451 AA; 52010 MW; 664623EAB3D3A331 CRC64;
Query Match 63.9%; Score 39; DB 1; Length 451;
Best Local Similarity 50.0%; Pred. No. 11;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 CISVPLTSPV 10
Db 90 CINIPIDSIP 99
||::||:|:|
|::||:|:|

RESULT 6
A1M1_HUMAN STANDARD; PRT; 1723 AA.
AC Q9Y4K1; O00296;
DT 16-OCT-2001 (Rel. 40, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Absent in melanoma 1 protein.
GN A1M1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
SEQUENCE FROM N.A.
RP TISSUE=Liver;
RX MEDLINE=97250519; PubMed=9096375;
RA Ray M.E., Wistow G., Su Y.A., Meltzer P.S., Trent J.M.;
RT "A1M1, a novel non-lens member of the betagamma-crystallin
RT superfamily, is associated with the control of tumorigenicity in human
RT malignant melanoma."
RL Proc. Natl. Acad. Sci. U.S.A. 94:3229-3234(1997).
CC -!- FUNCTION: May function as suppressor of malignant melanoma. It may
CC exert its effects through interactions with the cytoskeleton.
CC -!- SIMILARITY: Belongs to the beta/gamma-crystallin family.
CC -!- SIMILARITY: Contains 12 beta/gamma crystallin 'Greek key' domains.
CC -!- SIMILARITY: Contains 1 ricin B-type lectin domain.
CC
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CC -----
DR EMBL; U83116; AAB53792.1; -.
DR EMBL; U83115; AAB53791.1; -.
DR HSSP; P02526; 1GAM.
DR Gene; HGNC:356; A1M1.
DR MIM; 601797; -.
DR InterPro; IPR001064; Crystallin.
DR ProSITE; PS50915; RICIN_B_Lectin.
DR InterPro; IPR000772; RicinB_lectin.
DR Pfam; PF00030; crystall; 6.
DR Pfam; PF00652; Ricin B lectin; 3.
DR PRINTS; PR01367; BGCRCRYSTALLIN.
DR SMART; SM00458; RICIN; 1.
DR SMART; SM00247; XTALbg; 6.
DR PROSITE; PS50231; RICIN_B_Lectin; 1.
DR Repeat; Lectin.
FT DOMAIN 1022 1061 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 1.
FT DOMAIN 1052 1117 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 2.
FT DOMAIN 1123 1163 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 3.
FT DOMAIN 1164 1206 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 4.

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FT DOMAIN 1218 1270 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 5.
FT DOMAIN 1271 1313 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 6.
FT DOMAIN 1319 1361 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 7.
FT DOMAIN 1362 1404 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 8.
FT DOMAIN 1415 1452 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 9.
FT DOMAIN 1453 1496 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 10.
FT DOMAIN 1502 1542 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 11.
FT DOMAIN 1543 1584 BETA/GAMMA CRYSTALLIN 'GREEK KEY' 12.
FT DOMAIN 1586 1719 RICIN B-TYPE LECTIN.
SQ SEQUENCE 1723 AA; 188646 MW; 7B50F681A627FB09 CRC64;
Query Match 63.9%; Score 39; DB 1; Length 1723;
Best Local Similarity 45.5%; Pred. No. 45;
Matches 5; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSPVC 11
Db 481 CVQSPISFPFC 491
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|:|::|||

RESULT 7
YD39_YEAST STANDARD; PRT; 503 AA.
AC Q03034;
DT 30-MAY-2000 (Rel. 39, Created)
DT 30-MAY-2000 (Rel. 39, Last sequence update)
DT 16-OCT-2001 (Rel. 40, Last annotation update)
DE Hypothetical 56.2 kDa protein in PAD1-YRF1 intergenic region.
GN YDR539W OR D3703.2.
OS Saccharomyces cerevisiae (Baker's yeast).
OC Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
OC Saccharomycetales; Saccharomycetaceae; Saccharomycetes.
OX NCBI_TaxID=4932;
RN [1]
SEQUENCE FROM N.A.
RA Dietrich F.S., Mulligan J., Allen E., Araujo R., Aviles E., Berno A.,
RA Carpenter J., Chen E., Cherry J.M., Chung E., Duncan M.,
RA Hunkle-Smith S., Hyman R., Komp C., Kashkari D., Lew H., Lin D.,
RA Mosedale D., Nakahara K., Namath A., Oefner P., Oh C., Petel F.X.,
RA Roberts D., Schramm S., Schroeder M., Shogren T., Shroff N.,
RA Winant A., Yelton M., Botstein D., Davis R.W.;
RL Submitted (DEC-1995) to the EMBL/GenBank/DBJ databases.
CC -!- SIMILARITY: Belongs to the ubid family.
CC
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CC -----
DR EMBL; U43834; AAB64981.1; -.
DR PIR; S62018; S62018.
DR GenOnline; J41031; -.
DR SGD; S0002947; YDR539W.
DR InterPro; IPR002830; carboxylase.
DR Pfam; PF01977; Ubid; 1.
DR TIGRFAMs; TIGR00148; TIGR00148; 1.
KW Hypothetical protein.
SQ SEQUENCE 503 AA; 56164 MW; 379B19319930B84F CRC64;
Query Match 62.3%; Score 38; DB 1; Length 503;
Best Local Similarity 60.0%; Pred. No. 18;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 2 ISVPLTSPVC 11
Db 115 ITVPSSAPC 124
|:|::|||
|:|::|||

RESULT 8
T9S2_MOUSE

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ID	T9S2_MOUSE	STANDARD;	PRT;	662 AA.
AC	P58021;			
DT	16-OCT-2001 (Rel. 40, Created)			
DT	16-OCT-2001 (Rel. 40, Last sequence update)			
DT	10-OCT-2003 (Rel. 42, Last annotation update)			
DE	Transmembrane 9 superfamily protein member 2 precursor.			
GN	TM9SF2.			
OS	Mus musculus (Mouse).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.			
OX	NCBI_TaxID=10090;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE=Breast tumor;			
RC	MEDLINE=22388257; PubMed=12477932;			
RA	Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,			
RA	Klausner R.D., Collins F.S., Wagner C.M., Schuler G.D.,			
RA	Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,			
RA	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,			
RA	Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,			
RA	Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,			
RA	Brownstein M.J., Uesdin T.B., Toshiyuki S., Carninci P., Prange C.,			
RA	Raba S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaby S.J.,			
RA	Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,			
RA	Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,			
RA	Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Sanchez A.,			
RA	Whiting J., Helton E., Kettman M., Madan A., Rodriguez S., Bouffard G.G.,			
RA	Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,			
RA	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,			
RA	Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,			
RA	Schmurch A., Schein J.E., Jones S.J.M., Marra M.A.; and			
RT	"Generation and initial analysis of more than 15,000 full-length			
RT	human and mouse cDNA sequences."			
RL	Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).			
CC	-!- FUNCTION: In the intracellular compartments, may function as a			
CC	channel or small molecule transporter (By similarity).			
CC	-!- SUBCELLULAR LOCATION: Integral membrane protein. Endosome			
CC	(Probable).			
CC	-!- SIMILARITY: Belongs to the nonaspanin (TM9SF) family.			
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EMBL	BC003862; AA03862.1; --			
DR	MGI:1915309; TM9SF2.			
DR	InterPro: IPR004240; EMP70.			
DR	Pfam: PF02990; EMP70; 1.			
KW	Signal; Transmembrane.			
FT	SIGNAL	1	28	
FT	CHAIN	29	662	
FT	POTENTIAL.			
FT	TRANSMEMBRANE 9 SUPERFAMILY PROTEIN			
FT	MEMBER 2.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
FT	POTENTIAL.			
FT	CYTOPLASMIC (POTENTIAL).			
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FT	LUMENAL (POTENTIAL).			
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FT	CYTOPLASMIC (POTENTIAL).			
FT	POTENTIAL.			
FT	LUMENAL (POTENTIAL).			
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 FT DOMAIN 544 554 LUMENAL (POTENTIAL).
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 FT DOMAIN 576 591 POTENTIAL.
 FT TRANSMEM 592 612 POTENTIAL.
 FT DOMAIN 613 631 LUMENAL (POTENTIAL).
 FT TRANSMEM 632 652 POTENTIAL.
 FT DOMAIN 653 663 POTENTIAL.
 SQ SEQUENCE 663 AA; 75775 MW; C21A4D224534734D CRC64;

Query Match 62.3%; Score 38; DB 1; Length 663;
 Best Local Similarity 77.8%; Pred. No. 25;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CISVPLTSV 9
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 Db 479 CISVPLTFI 487

RESULT 10
 CHD3 DROME STANDARD; PRT; 892 AA.
 ID _CHD3 DROME STANDARD; Q9VVZ3;
 AC O16102; Q8SVJ8; 892 AA.
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Chromodomain helicase-DNA-binding protein 3.
 GN CHD3 OR CG9594.
 OS Drosophila melanogaster (Fruit fly).
 OC Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
 OC Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
 OC Ephydroidea; Drosophilidae; Drosophila.
 OX NCBI_TaxID=7227;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Berkeley;
 RX MEDLINE=20196006; PubMed=10731132;
 RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
 RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Gallie R.P.,
 RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
 RA Sutton G.G., Wortman J.R., Vandeell M.D., Zhang Q., Chen L.X.,
 RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
 RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
 RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
 RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
 RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
 RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
 RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
 RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
 RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
 RA Dodson K., Dou L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
 RA Durbin K.J., Evangelista C.C., Ferraz C., Gerbasi W.M., Glasser K.,
 RA Foeller C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glavner K.,
 RA Glodek A., Gong F., Gorell J.H., Gu Z., Guan P., Harris M.,
 RA Harris N.L., Harvey D.A., Heiman T.J., Hernandez J.R., Houck J.,
 RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
 RA Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
 RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
 RA Lasok P., Lei Y., Levitsky A.A., Li J.H., Li Z., Liang Y., Lin X.,
 RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
 RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
 RA Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
 RA Nelson D.R., Nelson K.A., Nixon K., Nusser D.R., Paclele J.M.,
 RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
 RA Reiner K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
 RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
 RA Spier B., Spradling A.C., Stapleton M., Strong R., Sun E.,
 RA Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
 RA Wang Z.-Y., Wasegama D.A., Weinstock G.M., Weissbach J.,
 RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
 RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,

RA Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,
 RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;
 RT "The genome sequence of Drosophila melanogaster.";
 RL Science 287:2185-2195(2000).
 RN [2]
 RP REVISIONS.
 RX MEDLINE=22426069; PubMed=12537572;
 RA Misra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S.,
 RA Hradecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.E.,
 RA Smith C.D., Tupy J.L., Whitfield E.J., Bayraktaroglu L., Berman B.P.,
 RA Bettencourt B.R., Celniker S.E., de Grey A.D.N.J., Drysdale R.A.,
 RA Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q.,
 RA Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
 RA Lewis S.E.;
 RT "Annotation of the Drosophila melanogaster euchromatic genome: a
 RT systematic review.";
 RL Genome Biol. 3:RESEARCH0083.1-RESEARCH0083.22(2002).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Berkeley; TISSUE=Embryo;
 RX MEDLINE=22426066; PubMed=12537569;
 RA Stapleton M., Carlson J.W., Brokstein P., Yu C., Champe M.,
 RA George R.A., Guarni H., Kronmiller B., Paclele J.M., Park S., Wan K.H.,
 RA Rubin G.M., Celniker S.E.;
 RT "A Drosophila full-length cDNA resource.";
 RL Genome Biol. 3:RESEARCH0080.1-RESEARCH0080.8(2002).
 RN [4]
 RP SEQUENCE OF 1-812 FROM N.A.
 RX MEDLINE=97470991; PubMed=9326634;
 RA Woodage T., Baerai M.A., Baxevas A.D., Hieter P., Collins F.S.;
 RT "Characterization of the CHD family of proteins.";
 RL Proc. Natl. Acad. Sci. U.S.A. 94:11472-11477(1997).
 CC -!- FUNCTION: Possible transcription activator (By similarity).
 CC -!- SUBCELLULAR LOCATION: Nuclear (By similarity).
 CC -!- SIMILARITY: Belongs to the SNF2/RAD54 helicase family.
 CC -!- SIMILARITY: Contains 2 chromo domains.
 CC -!- SIMILARITY: Contains 1 PHD-type zinc finger.
 CC -!- CAUTION: Ref.3 sequence differs from that shown due to a stop
 CC codon in position 628 and a frameshift in position 720.
 CC -!- CAUTION: Ref.4 sequence differs from that shown due to cloning
 CC artefacts.

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 or send an email to license@isb-sib.ch).

EMBL; AB003517; AAF49162.2; -
 EMBL; AY071503; AAL49125.1; ALT_FRAME.
 EMBL; AF007780; AAB87384.1; ALT_SEQ.
 FlyBase; FBgn0023395; Chd3
 GO; GO:0005634; C:nucleus; ISS.
 GO; GO:0003682; F:chromatin binding; ISS.
 GO; GO:0004386; F:helicase activity; ISS.
 GO; GO:0006333; P:chromatin assembly/disassembly; NAS.
 InterPro; IPR000953; Chromo.
 InterPro; IPR001410; DEAD.
 InterPro; IPR002464; DEAH_box.
 InterPro; IPR001650; Helicase_C.
 InterPro; IPR000330; SNF2_N.
 InterPro; IPR001965; Znf_PHD.
 Pfam; PF00271; Helicase_C; 1.
 Pfam; PF00176; SNF2_N; 1.
 Pfam; PF00628; PHD; 1.
 SMART; SM00298; CHROMO; 2.
 SMART; SM00487; DEXDC; 1.
 SMART; SM00490; HELIC; 1.
 SMART; SM00249; PHD; 1.
 PROSITE; PS00598; CHROMO_1; FALSE_NEG.
 PROSITE; PS50013; CHROMO_2; 2.

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DR InterPIO; 1PR002464; DEAH_Box.
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1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

[illegible]

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CC EMBL; U67503; AAB98532.1; -;
DR TIGR; MJO539; -;
DR HAMAP; MF 00177; -; 1.
DR InterPro; IPR002904; Lys tRNA-synt 1c.
DR InterPro; IPR008925; tRNA-synt bind.
DR InterPro; IPR001412; tRNA-synt 1.
DR Pfam; PF01921; tRNA-synt 1f; 1.
DR TIGRFAMs; TIGR00467; lysS arch; 1.
DR PROSITE; PS00178; AA TRNA LIGASE I; 1.
KW Aminocacyl-tRNA synthetase; Protein biosynthesis; Ligase; ATP-binding;
KW Complete proteome.
FT SITE 28 36 "HIGH" REGION.
FT SITE 278 282 "KMSKS" REGION.
SQ SEQUENCE 530 AA; 61921 MW; 5811837C8A349E9C CRC64;

Query Match 59.0%; Score 36; DB 1; Length 530;
Best Local Similarity 50.0%; Pred. No. 46;
Matches 5; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 2 ISVPLTSVPC 11
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DB 84 IGMFLSEIPC 93

RESULT 15
SYK METMP STANDARD; PRT; 533 AA.
AC Q30522;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Lysyl-tRNA synthetase (EC 6.1.1.6) (lysine-tRNA ligase) (LysRS).
GN LYS.
OS Methanococcus maripaludis.
OC Archaea; Euryarchaeota; Methanococci; Methanococcales;
OC Methanococcaceae; Methanococcus.
OX NCBI_TaxID=39152;
RN [1]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 1-22.
RC STRAIN=JJ;
RX MEDLINE=98016282; PubMed=9353192;
RA Ibbas M., Morgan S., Curnow A.W., Pridmore D.R., Voithknecht U.C.,
RA Gardner W., Lin W., Woesse C.R., Soell D.;
RT "A euryarchaeal lysyl-tRNA synthetase: resemblance to class I
synthetases.";
RL Science 278:1119-1122(1997).
RN [2]
RP CHARACTERIZATION.
RX MEDLINE=20570460; PubMed=11121028;
RA Soell D., Becker H.D., Plateau P., Blanquet S., Ibbas M.;
RT "Context-dependent anticodon recognition by class I lysyl-tRNA
synthetases.";
RL Proc. Natl. Acad. Sci. U.S.A. 97:14224-14228(2000).
CC -1- CATALYTIC ACTIVITY: ATP + L-lysine + tRNA(Lys) = AMP + diphosphate
CC + L-lysyl-tRNA(Lys).
CC -1- SUBCELLULAR LOCATION: Cytoplasmic.
CC -1- MISCELLANEOUS: Able to charge E.coli tRNA(Lys) in vitro.
CC -1- SIMILARITY: Belongs to class-I aminoacyl-tRNA synthetase family.

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CC or send an email to license@isb-sib.ch).

CC EMBL; AF009824; AAB87410.1; -;
DR PIR; T46975; T46975.
DR HAMAP; MF 00177; -; 1.
DR InterPro; IPR002904; Lys tRNA-synt 1c.
DR InterPro; IPR008925; tRNA-synt bind.
DR InterPro; IPR001412; tRNA-synt 1.
DR Pfam; PF01921; tRNA-synt 1f; 1.
DR TIGRFAMs; TIGR00467; lysS arch; 1.
DR PROSITE; PS00178; AA TRNA LIGASE I; 1.
KW Aminocacyl-tRNA synthetase; Protein biosynthesis; Ligase; ATP-binding;
KW Complete proteome.
FT SITE 28 36 "HIGH" REGION.
FT SITE 278 282 "KMSKS" REGION.
FT CONFLICT 11 11 I -> L (IN REF. 1; AA SEQUENCE).
SQ SEQUENCE 533 AA; 61273 MW; 007FA868A57A0AC2 CRC64;

Query Match 59.0%; Score 36; DB 1; Length 533;
Best Local Similarity 50.0%; Pred. No. 46;
Matches 5; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 2 ISVPLTSVPC 11
| :||: |||
DB 84 IGMFLSEIPC 93

Search completed: September 5, 2004, 09:56:04
Job time : 7 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: September 5, 2004, 09:46:09 ; Search time 24.8889 Seconds
(without alignments)
139.448 Million cell updates/sec

Title: US-09-761-636A-7

Perfect score: 61

Sequence: 1 CISVPLTSVPC 11

Scoring table:
BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

SPTREMBL.25:*
1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phase:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_rvirus:*
16: sp_bacteriap:*
17: sp_archaeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	43	70.5	122	6 Q9GLX1	Q9glx1 bos taurus
2	43	70.5	252	13 Q8QGD7	Q8qgd7 gallus gall
3	43	70.5	326	11 Q91Z54	Q91ze4 rattus norv
4	42	68.9	348	5 Q9GUB7	Q9gub7 caenorhabdi
5	41	67.2	118	11 Q8C7W1	Q8c7w1 mus musculu
6	40	65.6	208	5 Q9NF93	Q9nff3 leishmania
7	40	65.6	474	11 Q8VIA1	Q8via1 mus musculu
8	40	65.6	782	11 Q8VDF2	Q8vdf2 mus musculu
9	40	65.6	782	11 Q9ZIH6	Q9zih6 mus musculu
10	39	63.9	169	17 Q9Y9B5	Q9y9b5 aeropyrum p
11	39	63.9	318	12 Q9PY69	Q9py69 soybean mos
12	39	63.9	366	16 Q7U7P2	Q7u7p2 synchococc
13	39	63.9	386	16 Q7V6T2	Q7v6t2 prochloroco
14	39	63.9	500	4 Q8NA51	Q8na51 homo sapien
15	39	63.9	661	10 Q9XGQ5	Q9xgq5 oryza sativ
16	39	63.9	707	11 Q8BW61	Q8bw61 mus musculu

17	39	63.9	737	11	Q8BW83	Q8bw83 mus musculu
18	39	63.9	925	6	Q8HXK6	Q8hxx6 macaca fasc
19	39	63.9	1062	4	Q9NSW2	Q9nsw2 homo sapien
20	39	63.9	1411	4	Q96QW6	Q9eqw6 homo sapien
21	39	63.9	1513	3	Q9HDV4	Q9hdv4 schizosacch
22	38	62.3	91	13	Q7T3K0	Q7t3k0 oncorhynch
23	38	62.3	207	3	Q09411	Q09411 arthroderna
24	38	62.3	318	12	Q68691	Q68691 hepatitis c
25	38	62.3	324	5	Q16608	Q16608 caenorhabdi
26	38	62.3	425	10	Q8L424	Q8l424 arabidopsis
27	38	62.3	577	5	Q8I291	Q8i291 plasmodium
28	38	62.3	616	5	Q20852	Q20852 caenorhabdi
29	38	62.3	658	10	Q9FYQ8	Q9fyq8 arabidopsis
30	38	62.3	658	13	Q7ZUF5	Q7zuf5 brachydanio
31	38	62.3	662	11	Q8C7F9	Q8c7f9 mus musculu
32	38	62.3	662	11	Q8CGH4	Q8cgh4 mus musculu
33	38	62.3	1829	5	Q19815	Q19815 caenorhabdi
34	37	60.7	54	5	Q8IF84	Q8if84 trypanosoma
35	37	60.7	105	3	Q8NIN9	Q8nin9 cladosporiu
36	37	60.7	178	16	Q9L5F5	Q9l5f5 salmonella
37	37	60.7	184	10	Q9SYM6	Q9sym6 arabidopsis
38	37	60.7	191	12	Q8G14	Q8g14 human echov
39	37	60.7	251	12	Q9Q8N8	Q9q8n8 myxoma viru
40	37	60.7	251	12	Q9Q913	Q9q913 Shope fibro
41	37	60.7	272	16	Q8DJU6	Q8dju6 synchococc
42	37	60.7	347	10	Q7XVB5	Q7xvb5 oryza sativ
43	37	60.7	377	16	Q7VB14	Q7vbi4 prochloroco
44	37	60.7	389	3	Q872N5	Q872n5 neurospora
45	37	60.7	401	10	Q93YR2	Q93yr2 arabidopsis

ALIGNMENTS

RESULT 1

Q9GLX1
ID Q9GLX1 PRELIMINARY; PRT; 122 AA.
AC Q9GLX1;
DT 01-MAR-2001 (Tremblrel. 16, Created)
DT 01-MAR-2001 (Tremblrel. 16, Last sequence update)
DT 01-JUN-2003 (Tremblrel. 24, Last annotation update)
DE Vascular endothelial growth factor-D (fragment).
GN VEGF-D.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]_TaxID=9913;
RP SEQUENCE FROM N.A.
RC TISSUE=Lung;
RA Mandriota S.J., Pepper M.S.;
RL Submitted (OCT-1998) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF099135; AAC29747.1; -;
DR GO; GO:0016030; C:membrane; IEA.
DR GO; GO:0008083; P:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR004153; CXCXC repeat.
DR Pfam; PF03128; CXCXC; 2.
DR ProDom; PD001629; PD_growth_factor; 1.
FT NON_TER 1
FT NON_TER 122
SQ SEQUENCE 122 AA; 13820 MW; CC504B00E29D54EB CRC64;

Query Match 70.5%; Score 43; DB 6; Length 122;
Best Local Similarity 100.0%; Pred. No. 3.5;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ISVPLTSVP 10
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Db 1 ISVPLTSVP 9
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DR PROSITE; PS50278; PDGF_2; 1.
SQ SEQUENCE 326 AA; 37106 MW; D7CABDA6C9FABB7D CRC64;

Query Match 70.5%; Score 43; DB 11; Length 326;
Best Local Similarity 100.0%; Pred. No. 9.1; Mismatches 0; Indels 0; Gaps 0;
Matches 9; Conservative 0;

QY 2 ISVPLTSVP 10
Db 173 ISVPLTSVP 181
|||||

RESULT 4
Q9GUB7 PRELIMINARY; PRT; 348 AA.
AC Q9GUB7;
DT 01-MAR-2001 (TrEMBLrel. 16, Created)
DT 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Hypothetical protein.
GN F25E5.13.
OS Caenorhabditis elegans.
OC Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
OC Rhabditidae; Peloderinae; Caenorhabditis.
OX NCBI_TaxID=6239;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Bristol N2;
RX MEDLINE=99069613; PubMed=9851916;
RA None;
RT "Genome sequence of the nematode C. elegans: a platform for
investigating biology. The C. elegans Sequencing Consortium.";
RL Science 282:2012-2018 (1998).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Bristol N2;
RX MEDLINE=99069613; PubMed=9851916;
RA None;
RT "The sequence of C. elegans cosmid F25E5.";
RL Submitted (JUL-1998) to the EMBL/GenBank/DBJ databases.
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN=Bristol N2;
RX Waterston R.;
RT "Direct Submission.";
RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
EMBL: AF078157; AAG24081.1; -.
DR WormPep; F25E5.13; CE24915.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR InterPro; IPR003003; 7TM_chemrecept2.
DR InterPro; IPR000168; Nm7TM_chemrecept.
DR Pfam; PF01604; 7tm.5; 1.
KW Hypothetical protein.
SQ SEQUENCE 348 AA; 39882 MW; 456DEC8833CF3176 CRC64;

Query Match 68.9%; Score 42; DB 5; Length 348;
Best Local Similarity 54.5%; Pred. No. 15;
Matches 6; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 11
Db 33 CFSIQLVSIPC 43
|||||

RESULT 5
Q8C7W1 PRELIMINARY; PRT; 118 AA.
AC Q8C7W1;
DT 01-MAR-2003 (TrEMBLrel. 23, Created)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Hypothetical protein.
GN C330008L01RIK OR AW048023.

RESULT 2
Q8QGD7 PRELIMINARY; PRT; 252 AA.
AC Q8QGD7;
DT 01-JUN-2002 (TrEMBLrel. 21, Created)
DT 01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor D.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RA Diaz-Trelles R., Rodriguez-Leon J., Kawakami Y.,
RA Izpisua-Belmonte J.C.;
RT "Expression of the chick vascular endothelial growth factor D gene
during limb development.";
RL Mech. Dev. 0:0-0(2002).
DR EMBL; AF479650; AAM12733.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF_1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
SQ SEQUENCE 252 AA; 28767 MW; 643475DAB2E72F27 CRC64;

Query Match 70.5%; Score 43; DB 13; Length 252;
Best Local Similarity 100.0%; Pred. No. 7.1; Mismatches 0; Indels 0; Gaps 0;
Matches 9; Conservative 0;

QY 2 ISVPLTSVP 10
Db 168 ISVPLTSVP 176
|||||

RESULT 3
Q91ZE4 PRELIMINARY; PRT; 326 AA.
AC Q91ZE4;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE VEGF-D.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Sprague-Dawley;
RA Kirkin V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J.,
RA Pepper M.S., Giannis A., Sleeman J.P.;
RT "Characterization of indolinones which specifically inhibit VEGF-C-and
VEGF-D-induced activation of VEGFR-3 but not VEGFR-2.";
RL Eur. J. Biochem. 0:0-0(2001).
DR EMBL; AY032728; AAK96008.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR004153; CXKC_repeat.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXKC; 1.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF_1.
DR PROSITE; PS00249; PDGF_1; 1.


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OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; PubMed=12466851;
RA MEDLINE=20354683; PubMed=12466851;
RA The FANTOM Consortium,
RA the RIKEN Genome Exploration Research Group Phase I & II Team;
RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs.";
RL Nature 420:563-573(2002).;
DR EMBL; AK049158; BAC33576.1; -.
DR MGD; MGI:2147036; C30008J01Rik.
KW Hypothetical protein.
SQ SEQUENCE 118 AA; 12658 MW; 7245EA643F9123A CRC64;

Query Match 67.2%; Score 41; DB 11; Length 118;
Best Local Similarity 54.5%; Pred. No. 8;
Matches 6; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 11
Db : ||| ||
95 CLPTLTPTPC 105

RESULT 6
Q9NF93 PRELIMINARY; PRT; 208 AA.
AC Q9NF93;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Hypothetical transmembrane protein L8032.05a.
GN L8032.05a.
OS Leishmania major.
OC Eukaryota; Euzlenozoa; Kinetoplastida; Trypanosomatidae; Leishmania.
OX NCBI_TaxID=5664;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Friedlin;
RA Ivens A.C., Murphy L., Quail M., Harris D., Oliver K., Lawson D.,
RA Rajandream M.A., Barrell B.G.;
RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Friedlin;
RX MEDLINE=98146435; PubMed=9477341;
RA Ivens A.C., Lewis S.M., Bagherzadeh A., Zhang L., Chan H.M.,
RA Smith D.F.;
RT "A physical map of the Leishmania major Friedlin genome.";
RL Genome Res. 8:135-145(1998).
DR EMBL; AL139794; CAC22646.1; -.
DR GO; GO:0016021; C:integral to membrane; IEA.
KW Transmembrane.
SQ SEQUENCE 208 AA; 23200 MW; 11DB7F6DDDC566A3 CRC64;

Query Match 65.6%; Score 40; DB 5; Length 208;
Best Local Similarity 63.6%; Pred. No. 21;
Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 11
Db : ||| ||
96 CVSVPLMSACC 106

RESULT 7
Q8VIA1 PRELIMINARY; PRT; 474 AA.
ID Q8VIA1
AC Q8VIA1;
DT 01-MAR-2002 (TrEMBLrel. 20, Created)
DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)

OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=;
RA Strausberg R.;
RL Submitted (JAN-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; BC022167; AAH22167.1; -.
DR MGD; MGI:1338889; NP95.
DR GO; GO:0003677; F:DNA binding; IEA.
DR GO; GO:0005215; F:transporter activity; IEA.
DR GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
DR GO; GO:0006810; P:transport; IEA.
DR InterPro; IPR003105; G9a.
DR InterPro; IPR000566; Lipocln_cytFABP.
DR InterPro; IPR000626; Ubiquitin.
DR InterPro; IPR001965; Znf_PHD.

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DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE NP95 (Fragment).
GN NP95.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=;
RA Kanari Y., Kubo E., Kurihara T., Takabe T., Tatsumi K., Muto M.;
RT "Targeted Disruption of Np95 Gene Renders ES cells Hypersensitive to
RT DNA Damage and DNA Replication Blocks.";
RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB066245; BAB79496.1; -.
DR GO; GO:0003677; F:DNA binding; IEA.
DR GO; GO:0005215; F:transporter activity; IEA.
DR GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
DR GO; GO:0006810; P:transport; IEA.
DR InterPro; IPR003105; G9a.
DR InterPro; IPR000566; Lipocln_cytFABP.
DR InterPro; IPR000626; Ubiquitin.
DR InterPro; IPR001965; Znf_PHD.
DR InterPro; IPR001841; Znf_ring.
DR Pfam; PF00628; PHD; 1.
DR Pfam; PF00240; ubiquitin; 1.
DR Pfam; PF02182; YDG_SRA; 1.
DR PRINTS; PR00348; UBIQUITIN.
DR SMART; SM00249; PHD; 1.
DR SMART; SM00213; UBQ; 1.
DR PROSITE; PS00213; LIPOCALIN; 1.
DR PROSITE; PS0053; UBIQUITIN_2; 1.
DR PROSITE; PS01359; ZF_PHD_1; 1.
DR PROSITE; PS00016; ZF_PHD_2; 1.
DR PROSITE; PS00089; ZF_RING_2; 1.
DR NON_TER 474
FT NON_TER 474
SQ SEQUENCE 474 AA; 53685 MW; 0EAE841CCD8C7FEA CRC64;

Query Match 65.6%; Score 40; DB 11; Length 474;
Best Local Similarity 70.0%; Pred. No. 46;
Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 CISVPLTSVP 10
Db : ||| ||
349 CLKPLTSVP 358

RESULT 8
Q8VDF2 PRELIMINARY; PRT; 782 AA.
ID Q8VDF2
AC Q8VDF2;
DT 01-MAR-2002 (TrEMBLrel. 20, Created)
DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Nuclear protein 95.
GN NP95.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=;
RA Strausberg R.;
RL Submitted (JAN-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; BC022167; AAH22167.1; -.
DR MGD; MGI:1338889; NP95.
DR GO; GO:0003677; F:DNA binding; IEA.
DR GO; GO:0005215; F:transporter activity; IEA.
DR GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
DR GO; GO:0006810; P:transport; IEA.
DR InterPro; IPR003105; G9a.
DR InterPro; IPR000566; Lipocln_cytFABP.
DR InterPro; IPR000626; Ubiquitin.
DR InterPro; IPR001965; Znf_PHD.

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DR InterPro; IPR001841; Znf_ring.
DR Pfam; PF00628; PHD; 1.
DR Pfam; PF00240; ubiquitin; 1.
DR Pfam; PF02182; YDG_SRA; 1.
DR Pfam; PF00097; zf-C3HC4; 1.
DR PRINTS; PRO0348; UBIQUITIN.
DR SMART; SM00249; PHD; 1.
DR SMART; SM00184; RING; 2.
DR SMART; SM00466; SRA; 1.
DR SMART; SM00213; UBO; 1.
DR PROSITE; PS00213; LIPOCALIN; 1.
DR PROSITE; PS00053; UBIQUITIN_2; 1.
DR PROSITE; PS01359; ZF_PHD_1; 1.
DR PROSITE; PS00016; ZF_PHD_2; 1.
DR PROSITE; PS00518; ZF_RING_1; 1.
DR PROSITE; PS00518; ZF_RING_2; 1.
DR PROSITE; PS00089; ZF_RING_2; 2.
SQ SEQUENCE 782 AA; 88303 MW; DC5EEDFCDF79074 CRC64;

Query Match 65.6%; Score 40; DB 11; Length 782;
Best Local Similarity 70.0%; Pred. No. 74;
Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 CISVPLTSVP 10
Db 349 CLKPLTSVP 358

RESULT 9
Q9ZLH6 PRELIMINARY; PRT; 782 AA.
ID Q9ZLH6
AC Q9ZLH6 (TRENBLrel. 10, Created)
DT 01-MAY-1999 (TRENBLrel. 10, Last sequence update)
DT 01-MAY-1999 (TRENBLrel. 10, Last sequence update)
DT 01-OCT-2003 (TRENBLrel. 25, Last annotation update)
DE Nuclear protein np95 (Nuclear zinc finger protein Np95).
GN NP95 OR UHRF1.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
[1]
RN SEQUENCE FROM N.A.
RC TISSUE=Pre-Tcell;
RX MEDLINE=9909250; PubMed=9880673;
RA Fujimori A., Matsuda Y., Takemoto Y., Hashimoto Y., Kubo E., Araki R.,
RA Fukumura R., Mita K., Tatsumi K., Muto M.;
RT Cloning and mapping of Np95 gene which encodes a novel nuclear
RT protein associated with cell proliferation."
RL Mamm. Genome 9:1032-1035(1998).
RN [2]
RN SEQUENCE FROM N.A.
RA Davenport J.W., Fernandes E.R., Neale G.A.M., Goorha R.M.;
RT "LMO2-induced T cell leukemias overexpress Np95, a gene containing
RT RING and PHD zinc fingers and an ubiquitin-like domain."
RL Submitted (JUN-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL; D87308; BAA74579.1; -.
DR EMBL; AF274046; AAKG5743.1; -.
DR HSSP; Q15943; 1ND0.
DR MGD; MGI:1338889; Np95.
DR GO; GO:0003677; P:DNA binding; IEA.
DR GO; GO:0005215; P:transporter activity; IEA.
DR GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
DR GO; GO:0006810; P:transport; IEA.
DR InterPro; IPR003105; G9a.
DR InterPro; IPR000566; Lipocln_cytFAPB.
DR InterPro; IPR000626; Ubiquitin.
DR InterPro; IPR001365; Znf_PHD.
DR InterPro; IPR001841; Znf_ring.
DR Pfam; PF00628; PHD; 1.
DR Pfam; PF00240; ubiquitin; 1.
DR Pfam; PF02182; YDG_SRA; 1.
DR Pfam; PF00097; zf-C3HC4; 1.
DR PRINTS; PRO0348; UBIQUITIN.

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RP SEQUENCE FROM N.A.
RC STRAIN=Ch1;
RA Latorre I.J., Domier L.L., Hartman G.L.;
RT "Natural variability of soybean mosaic virus.";
RL Submitted (NOV-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF200544; AAF13954.1; -.
DR GO: GO:0004197; F:cysteine-type endopeptidase activity; IEA.
DR GO: GO:0008233; F:peptidase activity; IEA.
DR GO: GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro: IPR002540; Poty_P1.
DR Pfam: PF01577; Poty_P1.1.
KW Protease.
FT NON_TER 1
FT NON_TER 318
SQ SEQUENCE 318 AA; 36291 MW; 0D2C1B46035AEAF1 CRC64;

Query Match 63.9%; Score 39; DB 12; Length 318;
Best Local Similarity 70.0%; Pred. No. 48;
Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 2 ISVPLTSVPC 11
Db 20 ISVPTNIPC 29

RESULT 12
ID Q7U7P2 PRELIMINARY; PRT; 366 AA.
AC Q7U7P2;
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Putative glycerol dehydrogenase (EC 1.1.1.6).
GN SYNW0939.
OS Synechococcus sp. (strain WH8102).
OC Bacteria; Cyanobacteria; Chroococcales; Synechococcus.
OX NCBI_TaxID=84588;
RN [1]

SEQUENCE FROM N.A.
RP Palenik B., Brahamsha B., Larimer F.W., Land M., Hauser L., Chain P.,
RA Lamerdin J., Regala W., Allen E.E., McCarren J., Paulsen I.,
RA Dufresne A., Partensky F., Webb E.A., Waterbury J.;
RT "The genome of a motile marine Synechococcus.";
RL Nature 424:1037-1042 (2003).
DR EMBL: BX569691; CAE07454.1; -.
KW Oxidoreductase; Complete proteome.
SQ SEQUENCE 366 AA; 38076 MW; 4C9E5230413AA11B CRC64;

Query Match 63.9%; Score 39; DB 16; Length 366;
Best Local Similarity 54.5%; Pred. No. 55;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 11
Db 113 CITVPLSAATC 123

RESULT 13
ID Q7V6T2 PRELIMINARY; PRT; 386 AA.
AC Q7V6T2;
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Purative glycerol dehydrogenase (EC 1.1.1.6).
GN GLDA GR FMI1062.
OS Prochlorococcus marinus (strain MIT 9313).
OC Bacteria; Cyanobacteria; Prochlorophytes; Prochlorococcales;
OC Prochlorococcus.
OX NCBI_TaxID=74547;
RN [1]

RP SEQUENCE FROM N.A.
RA Kocap G., Larimer F.W., Lamerdin J., Malfatti S., Chain P.,
RA Ahlgren N.A., Arellano A., Coleman M., Hauser L., Hess W.R.,
RA Johnson Z.I., Land M., Lindell D., Post A.F., Regala W., Shah M.,
RA Shaw S.L., Steglich C., Sullivan M.B., Ting C.S., Tolonen A.,
RA Webb E.A., Zinser E.R., Chisholm S.W.;
RT "Genome divergence in two Prochlorococcus ecotypes reflects oceanic
RT niche differentiation.";
RL Nature 424:1042-1047 (2003).
DR EMBL: BX572098; CAE21237.1; -.
KW Oxidoreductase; Complete proteome.
SQ SEQUENCE 386 AA; 41291 MW; 2CAC614ACF010B1B CRC64;

Query Match 63.9%; Score 39; DB 16; Length 386;
Best Local Similarity 54.5%; Pred. No. 57;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 CISVPLTSVPC 11
Db 122 CITVPLSAATC 132

RESULT 14
ID Q8NA51 PRELIMINARY; PRT; 500 AA.
AC Q8NA51;
DT 01-OCT-2002 (TrEMBLrel. 22, Created)
DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT 01-OCT-2002 (TrEMBLrel. 25, Last annotation update)
DE Hypothetical protein FLJ35838.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]

SEQUENCE FROM N.A.
RP Oshima A., Takahashi-Fujii A., Tanase T., Imose N., Takeuchi K.,
RA Arita M., Musashino K., Yuuki H., Hara H., Sugiyama T., Irie R.,
RA Otsuki T., Sato H., Wakamatsu A., Ishii S., Yamamoto J., Isono Y.,
RA Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamashita H.,
RA Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Kanda K., Wagatsuma M.,
RA Murakawa K., Kanehori K., Sugiyama A., Kawakami B., Suzuki Y.,
RA Sugano S., Nagahori K., Masuho Y., Nagai K., Isogai T.;
RT "NEDO human cDNA sequencing project.";
RL Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL: AK093157; BAC04077.1; -.
DR InterPro: IPR003961; FN_III.
DR InterPro: IPR008957; FN_III-like.
DR Pfam: PF00041; fn3; 1.
DR SMART: SM00060; FN3; 4.
KW Hypothetical protein.
SQ SEQUENCE 500 AA; 53566 MW; 0107DF313725F40 CRC64;

Query Match 63.9%; Score 39; DB 4; Length 500;
Best Local Similarity 77.8%; Pred. No. 74;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 3 SVPLTSVPC 11
Db 303 SVPLETVPC 311

RESULT 15
ID Q9XGQ5 PRELIMINARY; PRT; 661 AA.
AC Q9XGQ5;
DT 01-NOV-1999 (TrEMBLrel. 12, Created)
DT 01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE ESTs AU064813 (E40579).
OS Oryza sativa (Rice).

```

OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
OC Ehrhartoideae; Oryzeae; Oryza.
OX NCBI_TaxID=4530;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=cv. Nipponbare;
RA Sasaki T., Matsumoto T., Yamamoto K.;
RT "Oryza sativa nipponbare (GA3) genomic DNA, chromosome 8, PAC
RT clone:P0026F07.";
RL Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AF000364; BAA81763.1; -
DR Gramene; Q9XGQ5; -
DR GO; GO:0016021; C:integral to membrane; IEA.
DR GO; GO:0005215; F:transporter activity; IEA.
DR GO; GO:0006810; P:transport; IEA.
DR InterPro; IPR004240; EMP70.
DR Pfam; PF02990; EMP70; 1.
DR SEQUENCE 661 AA; 74533 MW; 612242C132F68B8E CRC64;
SQ

Query Match 63.9%; Score 39; DB 10; Length 661;
Best Local Similarity 88.9%; Pred. No. 96;
Matches 8; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 C1SVPLTSV 9
Db 478 C1SVPLTLV 486

Search completed: September 5, 2004, 09:59:56
Job time : 26.8889 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:37:49 ; Search time 36,1111 Seconds
(without alignments)
86.068 Million cell updates/sec

Title: US-09-761-636A-7

Perfect score: 61

Sequence: 1 C1SVPLTSVPC 11

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A_Geneseq_29Jan04:*

1: Geneseqp1980s:*

2: Geneseqp1990s:*

3: Geneseqp2000s:*

4: Geneseqp2001s:*

5: Geneseqp2002s:*

6: Geneseqp2003as:*

7: Geneseqp2003bs:*

8: Geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Length	DB	ID	Description
1	61	100.0	11	4	AAU04526	AAU04526 VEGF base
2	59	96.7	11	4	AAU04542	AAU04542 VEGF base
3	57	93.4	11	4	AAU04545	AAU04545 VEGF base
4	54	88.5	11	4	AAU04543	AAU04543 VEGF base
5	52	85.2	11	4	AAU04544	AAU04544 VEGF base
6	45.5	74.6	10	4	AAU04532	AAU04532 VEGF base
7	43	70.5	96	4	AAU04520	AAU04520 Human vas
8	43	70.5	109	2	AAU23889	AAU23889 Human vas
9	43	70.5	109	3	AAU11931	AAU11931 Human tru
10	43	70.5	109	6	ABB84621	ABB84621 Human vas
11	43	70.5	109	6	ABG73750	ABG73750 Human wil
12	43	70.5	110	5	AAU47933	AAU47933 Human VEG
13	43	70.5	178	2	AAU08287	AAU08287 Human VEG
14	43	70.5	287	6	ABG73779	ABG73779 Human NVR
15	43	70.5	321	2	AAW53243	AAW53243 Mus muscu
16	43	70.5	321	5	AAU47931	AAU47931 Mouse VEG
17	43	70.5	325	2	AAW53240	AAW53240 Homo sapi
18	43	70.5	325	4	AAU97572	AAU97572 Human VEG
19	43	70.5	326	2	AAW44296	AAW44296 Rat vascu
20	43	70.5	337	2	AAU08286	AAU08286 Human gro
21	43	70.5	354	2	AAW44293	AAW44293 Human vas
22	43	70.5	354	2	AAW49036	AAW49036 Human zve
23	43	70.5	354	2	AAW53241	AAW53241 Homo sapi
24	43	70.5	354	3	AAU10649	AAU10649 Human VEG
25	43	70.5	354	3	AAU70750	AAU70750 Human pre

ALIGNMENTS

RESULT 1

AAU04526
ID AAU04526 standard; peptide; 11 AA.

XX AC AAU04526;

XX DT 26-SEP-2001 (first entry)

XX DE VEGF based monocyclic peptide 3.

XX KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.
XX OS Synthetic.

XX FH Key Location/Qualifiers
XX FT Disulfide-bond 1..11
XX FT /note= "This bond cyclises the peptide"

XX PN WO200152875-A1.
XX PD 26-JUL-2001.

XX PF 18-JAN-2001; 2001WO-US001533.

XX PR 18-JAN-2000; 2000US-0176293P.

XX PR 16-MAY-2000; 2000US-0204590P.

XX PA (LUDW-) LUDWIG INST CANCER RES.

XX PI Achen MG, Hughes RA, Stacker S, Cendron A;

XX DR WPI; 2001-442248/47.

XX PT Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
from an exposed loop of a growth factor protein by oxidizing the cysteine
residues.
XX PS Claim 49; Page 32; 102pp; English.
XX CC The sequence represents a monomeric monocyclic peptide of the invention,
whose 3-dimensional structure is modelled on the expose loop of human
VEGFP (vascular endothelial growth factor). The invention relates to a
method of producing a monomeric monocyclic peptide by a measuring beta-
carbon separation distances on opposite antiparallel strands of a

AAU70983 Human vas
AAB29049 Human VEG
AAB37606 Human VEG
AAB70685 Human vas
AAU97573 Human VEG
AAU08441 Polypepti
ABG33055 Human vas
ABG32046 Human Flt
ABB84623 Human VEG
ADD08950 Human VEG
AAU14992 Murine c-
AAW44295 Mouse vas
AAW53242 Mus muscu
AAW47930 Mouse VEG
AAW14994 Human c-f
AAU07909 Human sec
AAU04533 VEGF base
AAU33238 Novel hum
AAU04076 Human sec
ABM74219 DNA clone

CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis.
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 CC
 CC Sequence 11 AA;

Query Match 100.0%; Score 61; DB 4; Length 11;
 Best Local Similarity 100.0%; Pred. No. 0.0016;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTSVPLTSVPC 11
 | | | | | | | | | |
 Db 1 CTSVPLTSVPC 11

RESULT 2
 AAU04542
 ID AAU04542 standard; peptide; 11 AA.

XX AAU04542;
 XX
 DT 26-SEP-2001 (first entry)
 XX
 DE VEGF based monocyclic peptide 20.
 XX
 KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.
 XX

OS Synthetic.
 XX
 XX Key Location/Qualifiers
 XX Disulfide-bond 1. 11
 FT /note= "This bond cyclises the peptide"

XX WO200152875-A1.
 XX 26-JUL-2001.
 XX
 XX 18-JAN-2001; 2001WO-US001533.
 XX
 XX 18-JAN-2000; 2000US-0176293P.
 XX 16-MAY-2000; 2000US-0204590P.
 XX (LUDW-) LUDWIG INST CANCER RES.

XX
 XX Achen MG, Hughes RA, Stacker S, Cendron A;
 XX WPI; 2001-442248/47.
 XX

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine

PT residues.

XX Example 25; Page 47; 102pp; English.

CC The sequence represents a monomeric monocyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the exposed loop of human
 CC VEGFD (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 CC
 CC Sequence 11 AA;

Query Match 96.7%; Score 59; DB 4; Length 11;
 Best Local Similarity 90.9%; Pred. No. 0.0034;
 Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTSVPLTSVPC 11
 | : | | | | | | | | | |
 Db 1 CLSVPLTSVPC 11

RESULT 3
 AAU04545
 ID AAU04545 standard; peptide; 11 AA.

XX AAU04545;
 XX
 DT 26-SEP-2001 (first entry)
 XX
 DE VEGF based monocyclic peptide 23.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.
 XX

OS Synthetic.

XX Key Location/Qualifiers
 XX Disulfide-bond 1. 11
 FT /note= "This bond cyclises the peptide"

XX WO200152875-A1.
 XX 26-JUL-2001.
 XX
 XX 18-JAN-2001; 2001WO-US001533.
 XX
 XX 18-JAN-2000; 2000US-0176293P.
 XX 16-MAY-2000; 2000US-0204590P.
 XX

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PA (LUDW-) LUDWIG INST CANCER RES.
XX
PI Achen MG, Hughes RA, Stacker S, Cendron A;
XX
XX WPI; 2001-442248/47.
XX
XX
XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
XX or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
XX from an exposed loop of a growth factor protein by oxidizing the cysteine
XX residues.
XX
XX Example 25; Page 47; 102pp; English.
XX
XX The sequence represents a monomeric monocyclic peptide of the invention,
XX whose 3-dimensional structure is modelled on the expose loop of human
XX VEGF (vascular endothelial growth factor). The invention relates to a
XX method of producing a monomeric monocyclic peptide by a measuring beta-
XX carbon separation distances on opposite antiparallel strands of a
XX peptide loop fragment from an exposed loop of a growth factor protein and
XX cyclising the peptide by oxidising the cysteine residues. The monocyclic
XX peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
XX peptides) and a cyclic peptide with at least one amino acid deleted prior
XX to cyclisation are used to interfere with angiogenesis,
XX neovascularisation or lymphangiogenesis in a mammal with a condition
XX characterised by angiogenesis, neovascularisation or lymphangiogenesis.
XX The condition is diabetic retinopathy, psoriasis, arthropathy,
XX hemangioma, vascularised malignant or benign tumour, post-recovery
XX cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
XX trauma, substance-induced neovascularisation of the liver, excessive
XX hormone-related angiogenic dysfunction, diabetes induced neovascular
XX sequelae, hypertension induced neovascularisation of the liver, excessive
XX infection. The peptides are also used to modulate vascular permeability
XX in a mammal (the mammal has a condition characterised by fluid
XX accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
XX or brain. The peptides are used to image blood vessels and lymphatic
XX vasculature. The monomeric and bicyclic peptides are used to interfere
XX with at least one biological activity induced by VEGF, VEGF-C or -D and
XX are also used in combination with an anti-inflammatory agent, to treat a
XX chronic inflammation, especially rheumatoid arthritis, psoriasis and
XX diabetic retinopathy
XX
XX Sequence 11 AA;
XX
XX Query Match 93.4%; Score 57; DB 4; Length 11;
XX Best Local Similarity 81.8%; Pred. No. 0.0072;
XX Matches 9; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 1 CTSVPLTSVPC 11
XX Db |:|||||:|
XX 1 CTSVPLTSVPC 11
XX
XX RESULT 4
XX AAU04543
XX ID AAU04543 standard; peptide; 11 AA.
XX
XX AC AAU04543;
XX
XX DT 26-SEP-2001 (first entry)
XX
XX DE VEGF based monocyclic peptide 21.
XX
XX KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
XX neovascularisation; lymphangiogenesis; psoriasis; tumour;
XX diabetes induced neovascular sequelae; rheumatoid arthritis;
XX diabetic retinopathy; chronic inflammation; cyclic.
XX
XX OS Synthetic.
XX
XX Key Location/Qualifiers
XX Disulfide-bond 1..11
XX /note= "This bond cyclises the peptide"
XX
XX

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PN WO200152875-A1.
XX
XX 26-JUL-2001.
XX
XX 18-JAN-2001; 2001WO-US001533.
XX
XX 18-JAN-2000; 2000US-0176293P.
XX
XX 16-MAY-2000; 2000US-0204590P.
XX
XX (LUDW-) LUDWIG INST CANCER RES.
XX
XX Achen MG, Hughes RA, Stacker S, Cendron A;
XX
XX WPI; 2001-442248/47.
XX
XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
XX or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
XX from an exposed loop of a growth factor protein by oxidizing the cysteine
XX residues.
XX
XX Example 25; Page 47; 102pp; English.
XX
XX The sequence represents a monomeric monocyclic peptide of the invention,
XX whose 3-dimensional structure is modelled on the expose loop of human
XX VEGF (vascular endothelial growth factor). The invention relates to a
XX method of producing a monomeric monocyclic peptide by a measuring beta-
XX carbon separation distances on opposite antiparallel strands of a
XX peptide loop fragment from an exposed loop of a growth factor protein and
XX cyclising the peptide by oxidising the cysteine residues. The monocyclic
XX peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
XX peptides) and a cyclic peptide with at least one amino acid deleted prior
XX to cyclisation are used to interfere with angiogenesis,
XX neovascularisation or lymphangiogenesis in a mammal with a condition
XX characterised by angiogenesis, neovascularisation or lymphangiogenesis.
XX The condition is diabetic retinopathy, psoriasis, arthropathy,
XX hemangioma, vascularised malignant or benign tumour, post-recovery
XX cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
XX trauma, substance-induced neovascularisation of the liver, excessive
XX hormone-related angiogenic dysfunction, diabetes induced neovascular
XX sequelae, hypertension induced neovascularisation of the liver, excessive
XX infection. The peptides are also used to modulate vascular permeability
XX in a mammal (the mammal has a condition characterised by fluid
XX accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
XX or brain. The peptides are used to image blood vessels and lymphatic
XX vasculature. The monomeric and bicyclic peptides are used to interfere
XX with at least one biological activity induced by VEGF, VEGF-C or -D and
XX are also used in combination with an anti-inflammatory agent, to treat a
XX chronic inflammation, especially rheumatoid arthritis, psoriasis and
XX diabetic retinopathy
XX
XX Sequence 11 AA;
XX
XX Query Match 88.5%; Score 54; DB 4; Length 11;
XX Best Local Similarity 72.7%; Pred. No. 0.023;
XX Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 1 CTSVPLTSVPC 11
XX Db |:|||||:|
XX 1 CTSVPLTSVPC 11
XX
XX RESULT 5
XX AAU04544
XX ID AAU04544 standard; peptide; 11 AA.
XX
XX AC AAU04544;
XX
XX DT 26-SEP-2001 (first entry)
XX
XX DE VEGF based monocyclic peptide 22.
XX
XX KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
XX neovascularisation; lymphangiogenesis; psoriasis; tumour;

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Sun Sep 5 10:36:32 2004

us-09-761-636a-7.open.rag

KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.
XX
OS Synthetic.

XX
FH Key Location/Qualifiers
FT Disulfide-bond 1..11
FT /note= "This bond cyclises the peptide"

XX
XX WO200152875-A1.
XX
XX 26-JUL-2001.

XX
XX 18-JAN-2001; 2001WO-US001533.
XX
XX 18-JAN-2000; 2000US-0176293P.
XX 16-MAY-2000; 2000US-0204590P.

XX
XX (LUDW-) LUDWIG INST CANCER RES.
XX
XX Achen MG, Hughes RA, Stacker S, Cendron A;
XX WPI; 2001-442248/47.

XX
XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
XX or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
XX from an exposed loop of a growth factor protein by oxidizing the cysteine
XX residues.

XX
XX Example 25; Page 47; 102pp; English.
XX
XX The sequence represents a monomeric monocyclic peptide of the invention,
XX whose 3-dimensional structure is modelled on the exposed loop of human
XX VEGF (vascular endothelial growth factor). The invention relates to a
XX method of producing a monomeric monocyclic peptide by a measuring beta-
XX carbon separation distances on opposite antiparallel strands of a
XX peptide loop fragment from an exposed loop of a growth factor protein and
XX cyclising the peptide by oxidising the cysteine residues. The monocyclic
XX peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
XX peptides) and a cyclic peptide with at least one amino acid deleted prior
XX to cyclisation are used to interfere with angiogenesis,
XX neovascularisation or lymphangiogenesis in a mammal with a condition
XX characterised by angiogenesis, neovascularisation or lymphangiogenesis.
XX The condition is diabetic retinopathy, psoriasis, arthropathy,
XX hemangioma, vascularised malignant or benign tumour, post-recovery
XX cerebrovascular accident, post-angioplasty stenosis, head, heat or cold
XX trauma, substance-induced neovascularisation of the liver, excessive
XX hormone-related angiogenic dysfunction, diabetes induced neovascular
XX sequelae, hypertension induced neovascular sequelae, or chronic liver
XX infection. The peptides are also used to modulate vascular permeability
XX in a mammal (the mammal has a condition characterised by fluid
XX accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
XX or brain. The peptides are used to image blood vessels and lymphatic
XX vasculature. The monomeric and bicyclic peptides are used to interfere
XX with at least one biological activity induced by VEGF, VEGF-C or -D and
XX are also used in combination with an anti-inflammatory agent, to treat a
XX chronic inflammation, especially rheumatoid arthritis, psoriasis and
XX diabetic retinopathy

XX
SQ Sequence 11 AA;

Query Match 85.2%; Score 52; DB 4; Length 11;
Best Local Similarity 72.7%; Pred. NO. 0.049;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTSVPLTSVPC 11
DB 1 CTSPLTSVPC 11

RESULT 6
AAU04532
ID AAU04532 standard; peptide; 10 AA.

XX
AC AAU04532;
XX
DT 26-SEP-2001 (first entry)
XX
DE VEGF based monocyclic peptide 10.
XX
KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.
XX
OS Synthetic.

XX
XX Key Location/Qualifiers
XX Disulfide-bond 1..10
XX /note= "This bond cyclises the peptide"

XX
XX WO200152875-A1.
XX
XX 26-JUL-2001.

XX
XX 18-JAN-2001; 2001WO-US001533.
XX
XX 18-JAN-2000; 2000US-0176293P.
XX 16-MAY-2000; 2000US-0204590P.

XX
XX (LUDW-) LUDWIG INST CANCER RES.
XX
XX Achen MG, Hughes RA, Stacker S, Cendron A;
XX WPI; 2001-442248/47.

XX
XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
XX or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
XX from an exposed loop of a growth factor protein by oxidizing the cysteine
XX residues.

XX
XX Claim 49; Page 32; 102pp; English.
XX
XX The sequence represents a monomeric monocyclic peptide of the invention,
XX whose 3-dimensional structure is modelled on the exposed loop of human
XX VEGF (vascular endothelial growth factor). The invention relates to a
XX method of producing a monomeric monocyclic peptide by a measuring beta-
XX carbon separation distances on opposite antiparallel strands of a
XX peptide loop fragment from an exposed loop of a growth factor protein and
XX cyclising the peptide by oxidising the cysteine residues. The monocyclic
XX peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
XX peptides) and a cyclic peptide with at least one amino acid deleted prior
XX to cyclisation are used to interfere with angiogenesis,
XX neovascularisation or lymphangiogenesis in a mammal with a condition
XX characterised by angiogenesis, neovascularisation or lymphangiogenesis.
XX The condition is diabetic retinopathy, psoriasis, arthropathy,
XX hemangioma, vascularised malignant or benign tumour, post-recovery
XX cerebrovascular accident, post-angioplasty stenosis, head, heat or cold
XX trauma, substance-induced neovascularisation of the liver, excessive
XX hormone-related angiogenic dysfunction, diabetes induced neovascular
XX sequelae, hypertension induced neovascular sequelae, or chronic liver
XX infection. The peptides are also used to modulate vascular permeability
XX in a mammal (the mammal has a condition characterised by fluid
XX accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
XX or brain. The peptides are used to image blood vessels and lymphatic
XX vasculature. The monomeric and bicyclic peptides are used to interfere
XX with at least one biological activity induced by VEGF, VEGF-C or -D and
XX are also used in combination with an anti-inflammatory agent, to treat a
XX chronic inflammation, especially rheumatoid arthritis, psoriasis and
XX diabetic retinopathy

XX
SQ Sequence 10 AA;

Query Match 74.6%; Score 45.5; DB 4; Length 10;
Best Local Similarity 90.9%; Pred. No. 0.52;
Matches 10; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

QY 1 CISVPLTSVPC 11
 ||||| |||||
 Db 1 CISVPL-SVPC 10

RESULT 7
 AAU04520
 XX AAU04520 standard; protein; 96 AA.
 XX AC
 XX AAU04520;
 XX DT 26-SEP-2001 (first entry)
 XX DE Human VEGF-D amino acids Val101-PRO186.
 XX KW Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation.
 XX OS Homo sapiens.
 XX PN WC200152875-A1.
 XX PD 26-JUL-2001.
 XX PF 18-JAN-2001; 2001WO-US001533.
 XX PR 18-JAN-2000; 2000US-0176293P.
 XX PR 16-MAY-2000; 2000US-0204590P.
 XX PA (LUDW-) LUDWIG INST CANCER RES.
 XX PI Achen MG, Hughes RA, Stackler S, Cendron A;
 XX WPI; 2001-442248/47.
 XX DR Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.
 XX Example 1; Page 89; 102pp; English.

The sequence represents Human VEGF-D (vascular endothelial growth factor)
 CC amino acids Val101-PRO186. The sequence is used in a method of producing
 CC a monomeric monocyclic peptide by a measuring beta-beta carbon separation
 CC distances on opposite antiparallel strands of a peptide loop fragment
 CC from an exposed loop of a growth factor protein and cyclizing the peptide
 CC by oxidising the cysteine residues. The monocyclic peptides, dimeric
 CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
 CC peptide with at least one amino acid deleted prior to cyclisation are
 CC used to interfere with angiogenesis, neovascularisation or
 CC lymphangiogenesis in a mammal with a condition characterised by
 CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
 CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
 CC malignant or benign tumour, post-recovery cerebrovascular accident, post-
 CC angioplasty restenosis, head, heat or cold trauma, substance-induced
 CC neovascularisation of the liver, excessive hormone-related angiogenic
 CC dysfunction, diabetes induced neovascular sequelae, hypertension induced
 CC neovascular sequelae, or chronic liver infection. The peptides are also
 CC used to modulate vascular permeability in a mammal (the mammal has a
 CC condition characterised by fluid accumulation in peripheral limbs or in
 CC lungs, peritoneal cavity, pleura, or brain. The peptides are used to
 CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
 CC peptides are used to interfere with at least one biological activity
 CC induced by VEGF, VEGF-C or -D and are also used in combination with an
 CC anti-inflammatory agent, to treat a chronic inflammation, especially
 CC rheumatoid arthritis, psoriasis and diabetic retinopathy.

XX Sequence 96 AA;

Query Match 70.5%; Score 43; DB 4; Length 96;
 Best Local Similarity 100.0%; Pred. No. 14;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ISVPLTSVP 10
 ||||| |||||
 Db 68 ISVPLTSVP 76

RESULT 8
 AAY23889
 XX ID AAY23889 standard; protein; 109 AA.
 XX AC AAY23889;
 XX DT 21-SEP-1999 (first entry)
 XX DE Human vascular endothelial growth factor (VEGF)-D.
 XX KW Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
 KW tumour; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
 KW wound healing; lymphedema; scleroderma; anhydrotic ectodermal dysplasia.
 XX OS Homo sapiens.
 XX PN WO9933485-A1.
 XX PD 08-JUL-1999.
 XX PF 23-DEC-1998; 98WO-US027373.
 XX PR 24-DEC-1997; 97AU-00001131.
 XX PR 29-MAY-1998; 98US-0087392P.
 XX PA (LUDW-) LUDWIG INST CANCER RES.
 XX PI Achen MG, Stackler SA, Alitalo K;
 XX WPI; 1999-405368/34.
 XX DR A human cell line stably expressing vascular endothelial growth factor D,
 PT useful for treating melanomas or tumors expressing VEGF-D.
 XX Claim 6; Page 72; 79pp; English.

The present sequence represents human vascular endothelial growth factor
 CC (VEGF)-D. The specification describes a human cell line which stably
 CC expresses VEGF-D, or fragments/analogs having VEGF-D biological
 CC activity. VEGF-D antagonists, e.g. antisense nucleic acids or triplex
 CC DNA, VEGF-D variants or antibodies (especially chimeric antibodies), are
 CC useful for the treatment or alleviation of malignant melanomas, tumours
 CC or psoriasis. Angiogenesis and lymphangiogenesis stimulating amounts of
 CC VEGF-D can be administered to enhance the acceptance and/or healing of
 CC skin grafts or to stimulate the healing of a surgical or traumatic wound
 CC to the skin. Lymphangiogenesis stimulating amounts of VEGF-D can be used
 CC to treat lymphedema. Endothelial proliferation stimulating amounts of
 CC VEGF-D are used to treat scleroderma. Vascularisation stimulating amounts
 CC of VEGF-D can be used to treat anhydrotic ectodermal dysplasia. VEGF-D
 CC antibodies are useful for detecting tumours expressing VEGF-D. Fully-
 CC processed VEGF-D can be used to stimulate at least one VEGF-D bioactivity
 CC chosen from endothelial cell proliferation, migration, survival and
 CC differentiation and lymphangiogenesis without inducing vascular
 CC permeability.

XX Sequence 109 AA;

Query Match 70.5%; Score 43; DB 2; Length 109;
 Best Local Similarity 100.0%; Pred. No. 16;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ISVPLTSVP 10
 ||||| |||||
 Db 76 ISVPLTSVP 84

RESULT 9	
AAB11931	
ID	AAB11931 standard; protein; 109 AA.
XX	
AC	AAB11931;
XX	
XX	
DT	20-NOV-2000 (first entry)
XX	
XX	
DE	Human truncated VEGF-D.
XX	
XX	Truncated VEGF-D; vascular endothelial growth factor; human;
KW	monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3;
KW	vascular permeability disorder; endothelial cell proliferative disorder;
KW	angiogenic disorder; lymphangiogenic disorder;
KW	neovascularisation disorder; endothelial cell differentiation disorder;
KW	cancer; diabetic retinopathy; psoriasis; arthropathy; pulmonary oedema;
KW	detection; diagnosis; imaging; lymphatic vasculature.
XX	
OS	Homo sapiens.
XX	
XX	
PN	WO200037025-A2.
XX	
XX	29-JUN-2000.
PD	
XX	
XX	21-DEC-1999; 99WO-US031332.
PF	
XX	
XX	21-DEC-1998; 98US-0113254P.
PR	
PR	17-MAY-1999; 99US-0134556P.
XX	
XX	(LUDW-) LUDWIG INST CANCER RES.
PA	
XX	
XX	Achen MG, Stacker SA;
XX	
PI	WPI; 2000-442498/38.
XX	
DR	
XX	
XX	Novel compositions comprising antibodies reactive to vascular endothelial
PT	growth factor-D, useful for treating, e.g. angiogenesis, lymphangiogenesis
PT	and neovascularization disorders.
PT	
XX	
XX	Claim 1; Fig 1; 44pp; English.
PS	
XX	
CC	This sequence represents a 109 amino acid truncated human VEGF-D
CC	(vascular endothelial growth factor D), lacking both the N- and C-
CC	terminal regions. The invention relates to a monoclonal antibody, or
CC	fragments thereof, which is specifically reactive with the truncated
CC	human VEGF-D, and methods of preparing the antibody. The antibody of the
CC	invention interferes with the binding of VEGF-D to the VEGF receptors
CC	VEGFR-2 and VEGFR-3, but does not interfere with the binding of VEGF to
CC	these receptors and additionally is not reactive with VEGF-C. The
CC	antibody may be used to treat disorders associated with vascular
CC	permeability, endothelial cell proliferation, angiogenesis,
CC	lymphangiogenesis, neovascularisation and endothelial cell
CC	differentiation, especially cancer, diabetic retinopathy, psoriasis, and
CC	arthropathies. The antibody may also be used to treat fluid accumulation
CC	in the heart and/or lung via modulation of vascular permeability. It may
CC	additionally be used to detect VEGF-D and may be used to image lymphatic
CC	vasculature in tissue
XX	
SQ	Sequence 109 AA;
Query Match	70.5%; Score 43; DB 3; Length 109;
Best Local Similarity	100.0%; Pred. No. 16;
Matches	9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY	2 ISVPLTSVP 10
DB	76 ISVPLTSVP 84
RESULT 10	
ABB84621	
ID	ABB84621 standard; protein; 109 AA.
XX	
AC	ABB84621;
XX	
DT	01-APR-2003 (first entry)
XX	
XX	
DE	Human wild-type VEGF-D monomer SEQ ID 3.
XX	
XX	Human; single-chain; extracellular ligand-binding domain; VEGF;
KW	vascular endothelial growth factor; VEGF type 2 receptor; KDR; Flt-4;
KW	VEGF type 3 receptor; VEGF-C; VEGF-D; signal transduction; angiogenesis;
KW	lymphangiogenesis.
XX	
OS	Homo sapiens.
XX	
XX	
FH	Key
Region	Location/Qualifiers
FT	8..18
FT	/note= "region of monomer likely to be modified by
FT	mutation as described in claim 9"
FT	36..49
FT	/note= "region of monomer likely to be modified by
FT	mutation as described in claim 9"
FT	55..60
FT	/note= "region of monomer likely to be modified by
FT	mutation as described in claim 9"
FT	Misc-difference 60
FT	/note= "This residues is described as Gln in Claim 9"
FT	70..86
FT	/note= "region of monomer likely to be modified by
FT	mutation as described in claim 9"
XX	
PN	WO200281520-A2.
XX	
XX	
PD	17-OCT-2002.
XX	
XX	
PF	08-APR-2002; 2002WO-DK000233.
XX	
PR	06-APR-2001; 2001DK-00000578.
PR	06-APR-2001; 2001US-0282239P.
XX	
XX	(MAXY-) MAXYGEN HOLDINGS LTD.
PA	
XX	
PI	Boesen TP, Halkier T;
XX	
XX	WPI; 2003-058505/05.
DR	
XX	
XX	Novel single-chain dimeric polypeptide for inhibiting angiogenesis, binds
PT	to extracellular ligand-binding domain of vascular endothelial growth
PT	factor type 2/type 3 receptor but does not activate the receptor.
XX	
PS	Claim 9; Page 66; 71pp; English.
XX	
CC	This invention describes a novel single-chain dimeric polypeptide which
CC	binds to extracellular ligand-binding domain of vascular endothelial
CC	growth factor (VEGF) type 2 receptor (KDR) or VEGF type 3 receptor (Flt-
CC	4). The polypeptide of the invention comprises two receptor-binding sites
CC	of which one is capable of binding to a ligand-binding domain of the
CC	receptor and one is incapable of effectively binding to a ligand-binding
CC	domain of the receptor, and at least one monomer of the dimeric
CC	polypeptide is derived from VEGF, VEGF-C or VEGF-D, where the polypeptide
CC	is capable of binding to the receptor, but incapable of activating the
CC	receptor. The polypeptide of the invention is useful for preparing a
CC	medicament for preventing or treating a disease or condition involving
CC	increased signal transduction from, or an increased activation of a VEGF
CC	type 2 or type 3 receptor e.g. for inhibiting angiogenesis or
CC	lymphangiogenesis. This sequence represents a human single-chain VEGF-D
CC	monomer which can be modified and used in the construction of a VEGF-
CC	based KDR antagonist described in the disclosure of the invention
XX	
SQ	Sequence 109 AA;
Query Match	70.5%; Score 43; DB 6; Length 109;
Best Local Similarity	100.0%; Pred. No. 16;

Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 2 ISVPLTSVP 10
 Db 76 ISVPLTSVP 84

RESULT 11
 ID ABG73750 standard; protein; 109 AA.
 AC ABG73750;
 DT 01-APR-2003 (first entry)
 DE Human VEGF-D monomer unit E57R variant.
 XX Human; single-chain; extracellular ligand-binding domain; VEGF;
 KW vascular endothelial growth factor; VEGF type 2 receptor; KDR; Flt-4;
 KW VEGF type 3 receptor; VEGF-C; VEGF-D; signal transduction; angiogenesis;
 KW lymphangiogenesis; mutant; mutein; variant.
 XX Homo sapiens.
 OS Synthetic.
 XX Key Location/Qualifiers
 FT Misc-difference 10
 FT /note= "This wild-type residue is replaced by Arg or Glu
 FT in the first monomer unit of the VEGF-D dimer if the E57R
 FT mutation has not occurred (see Claim 16) and is
 FT optionally replaced if the E57R mutation has occurred.
 FT The claim describes this residue as Ser but is shown as
 FT Ile in the sequence listing"
 FT Misc-difference 37
 FT /note= "This wild-type Asn residue is optionally replaced
 FT by Arg in the second monomer unit of the VEGF-D dimer
 FT (see Claim 11)"
 FT Misc-difference 38
 FT /note= "This wild type Thr residue is optionally replaced
 FT by Arg or Glu in the second monomer unit of the VEGF-D
 FT dimer (see Claims 11 and 16)"
 FT Misc-difference 39
 FT /note= "This wild type Phe residue is optionally replaced
 FT by Arg or Glu in the second monomer unit of the VEGF-D
 FT dimer (see Claims 11 and 16)"
 FT Misc-difference 40
 FT /note= "This wild type Phe residue is optionally replaced
 FT by Arg in the second monomer unit of the VEGF-D dimer
 FT (see Claim 11)"
 FT Misc-difference 57
 FT /label= E57R
 FT /note= "Wild type Gln is replaced by Arg in the first
 FT monomer unit of the VEGF-D dimer (see Claim 11) and is
 FT optionally replaced if the S10R/E mutation has occurred
 FT (see Claim 16)"
 FT Misc-difference 76
 FT /note= "This wild type Ile residue is optionally replaced
 FT by Arg or Glu in the second monomer unit of the VEGF-D
 FT dimer (see Claim 16)"
 PN WO200281520-A2.
 XX 17-OCT-2002.
 PD 08-APR-2002; 2002WO-DK000233.
 PF 06-APR-2001; 2001DK-00000578.
 PR 06-APR-2001; 2001US-0282239P.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 PA Bossen TP, Halkier T;
 XX

DR WPI; 2003-058505/05.
 XX Novel single-chain dimeric polypeptide for inhibiting angiogenesis, binds
 PT to extracellular ligand-binding domain of vascular endothelial growth
 PT factor type 2/type 3 receptor but does not activate the receptor.
 XX Claim 11; Page; 71pp; English.
 PS
 CC This invention describes a novel single-chain dimeric polypeptide which
 CC binds to extracellular ligand-binding domain of vascular endothelial
 CC growth factor (VEGF) type 2 receptor (KDR) or VEGF type 3 receptor (Fit-
 CC 4). The polypeptide of the invention comprises two receptor-binding sites
 CC of which one is capable of binding to a ligand-binding domain of the
 CC receptor and one is incapable of effectively binding to a ligand-binding
 CC domain of the receptor, and at least one monomer of the dimeric
 CC polypeptide is derived from VEGF, VEGF-C or VEGF-D, where the polypeptide
 CC is capable of binding to the receptor, but incapable of activating the
 CC receptor. The polypeptide of the invention is useful for preparing a
 CC medicament for preventing or treating a disease or condition involving
 CC increased signal transduction from, or an increased activation of a VEGF
 CC type 2 or type 3 receptor e.g. for inhibiting angiogenesis or
 CC lymphangiogenesis. This sequence represents a variant of the human VEGF-D
 CC monomer unit used in the construction of a VEGF-D dimer described in the
 CC disclosure of the invention. In one instance a polypeptide is claimed
 CC comprising a first monomer derived from VEGF-D having at least the
 CC mutation E57R and optionally comprising a second monomer derived from
 CC VEGF-D having at least one mutation selected from the group consisting of
 CC N37R, T38T, F39R and F40R. In a second instance a polypeptide is claimed
 CC comprising a first monomer containing a substitution consisting of S10R,
 CC S10E and E57R (although the residue at position 10 is an Ile), and/or in
 CC the other VEGF-D derived monomer at least one substitution selected from
 CC the group consisting of T38R, T38E, F39R, F39E, I76R and I76E. NOTE: This
 CC sequence is not represented in the body of the specification but has been
 CC constructed from the wild-type VEGF-D sequence represented in ABB84621
 XX Sequence 109 AA;
 SQ

Query Match 70.5%; Score 43; DB 6; Length 109;
 Best Local Similarity 100.0%; Pred. No. 16;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 2 ISVPLTSVP 10
 Db 76 ISVPLTSVP 84

RESULT 12
 ID AAM47933
 ID AAM47933 standard; protein; 110 AA.
 XX AAM47933;
 AC AAM47933;
 XX 28-FEB-2002 (first entry)
 DT Mouse VEGF-D VHD domain SEQ ID NO 6.
 DE Mouse; vascular endothelial growth factor-D; VEGF-D; proliferation;
 KW lymph vessel endothelial cell; VEGF receptor-3; neoplastic disease;
 KW VEGF-PDGF homology domain; VHD.
 XX Mus sp.
 OS WO200182870-A2.
 XX 08-NOV-2001.
 PD 03-MAY-2001; 2001WO-US014295.
 PF 03-MAY-2000; 2000US-0201421P.
 PR (LUDW-) LUDWIG INST CANCER RES.
 XX Achen MG, Stacker S;
 PI

[illegible]

CC angiogenesis and cell proliferation. NVR may also be used to promote
 CC revascularisation following traumatic amputation and surgical
 CC reconstruction or added to a tissue culture to promote vasculogenesis in
 CC tissues for autologous or heterologous transplant. Antagonists or
 CC inhibitors of NVR may be used to suppress or prevent angiogenesis and
 CC thus prevent the growth and development of cancers such as cancer of the
 CC brain, breast, intestine, kidney, lung, ovary, pancreas, prostate or
 CC uterus. The products of the invention can be used for gene therapy. This
 CC sequence represents the human NVR protein described in the disclosure of
 CC the invention
 XX
 SQ Sequence 287 AA;

Query Match 70.5%; Score 43; DB 6; Length 287;
 Best Local Similarity 100.0%; Pred. No. 44;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 2 ISVPLTSVP 10
 |||||
 Db 168 ISVPLTSVP 176

RESULT 15
 AAW53243
 ID AAW53243 standard; protein; 321 AA.
 XX
 AC AAW53243;
 XX
 DT 03-AUG-1998 (first entry)
 XX
 DE Mus musculus vascular endothelial growth factor D2 (VEGF-D2).
 XX
 KW vascular endothelial growth factor; VEGF-D; angiogenesis; modification;
 KW acceleration; wound healing; tissue; organ; transplants;
 KW collateral circulation; infarction; arterial stenosis;
 KW coronary artery disease; inhibition; cancer; treatment;
 KW diabetic retinopathy; lung disorders; blood circulation;
 KW gaseous exchange; chronic obstructive airway disease;
 KW intestinal malabsorptive syndrome; biopsy; metastatic risk; detection;
 KW diagnosis; congestive heart failure.
 XX

OS Mus musculus.
 XX
 PN WO9807832-A1.
 XX
 PD 26-FEB-1998.
 XX

PF 21-AUG-1997; 97WO-US014696.
 XX
 PR 23-AUG-1996; 96AU-00001825.
 PR 23-AUG-1996; 96US-0023751P.
 PR 11-NOV-1996; 96AU-00003554.
 PR 14-NOV-1996; 96US-0031097P.
 PR 05-FEB-1997; 97AU-00004954.
 PR 10-FEB-1997; 97US-0038814P.
 PR 19-JUN-1997; 97AU-00007435.
 PR 01-JUL-1997; 97US-0051426P.
 XX

PA (LUDW-) LUDWIG INST CANCER RES.
 PA (UYHE-) UNIV HELSINKI LICENSING LTD.
 XX
 PI Achen MG, Wilks AP, Stacker SA, Alitalo K;
 XX
 DR WPI, 1998-179057/16.
 DR N-PSDB; AAV20809.
 XX

PT New isolated vascular endothelial growth factor-D - used to develop
 PT products for use in e.g. modifying angiogenesis or treating lung, heart
 PT or intestinal disorders.
 XX

FS Claim 16; Page 64-65; 101pp; English.
 XX

CC The sequence is that of mouse lung vascular endothelial growth factor D2

CC (VEGF-D2). VEGF-D2 can be used for e.g. acceleration of angiogenesis in
 CC wound healing, tissue or organ transplantation, or to establish
 CC collateral circulation in tissue infarction or arterial stenosis, such as
 CC coronary artery disease, and inhibition of angiogenesis in the treatment
 CC of cancer or of diabetic retinopathy. It can also be used in the
 CC treatment of lung disorders to improve blood circulation in the lung
 CC and/or gaseous exchange between the lungs and the blood stream or to
 CC improve blood circulation to the heart and O2 gas permeability in cases
 CC of cardiac insufficiency, to improve blood flow and gaseous exchange in
 CC chronic obstructive airway disease, or to treat malabsorptive syndromes
 CC in the intestinal tract. Quantitation of VEGF-D in cancer biopsy
 CC specimens may be useful as an indicator of future metastatic risk.
 CC Antagonists can be used for treating e.g. conditions such as congestive
 CC heart failure, involving accumulations of fluid in the lung resulting
 CC from increases in vascular permeability. The products can also be used
 CC for detection and diagnosis
 XX
 SQ Sequence 321 AA;

Query Match 70.5%; Score 43; DB 2; Length 321;
 Best Local Similarity 100.0%; Pred. No. 49;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 2 ISVPLTSVP 10
 |||||
 Db 168 ISVPLTSVP 176

Search completed: September 5, 2004, 09:55:11
 Job time : 37.1111 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 10:00:15 ; Search time 30.8889 Seconds
(without alignments)
112.199 Million cell updates/sec

Title: US-09-761-636A-7

Perfect score: 61

Sequence: 1 CISVPLTSVPC 11

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1298764 seqs, 315065143 residues

Total number of hits satisfying chosen parameters: 1298764

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:*

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2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	61	100.0	11	9	US-09-761-636A-7
2	59	96.7	11	9	US-09-761-636A-23
3	57	93.4	11	9	US-09-761-636A-26
4	54	88.5	11	9	US-09-761-636A-24
5	52	85.2	11	9	US-09-761-636A-25
6	45.5	74.6	10	9	US-09-761-636A-13
7	43	70.5	49	13	US-10-139-876-11
8	43	70.5	81	13	US-10-086-623-18
9	43	70.5	81	14	US-10-260-539-18
10	43	70.5	96	9	US-09-761-636A-1
11	43	70.5	109	9	US-09-956-095-3
12	43	70.5	109	9	US-09-219-345A-1
13	43	70.5	109	16	US-10-779-731-1
14	43	70.5	110	10	US-09-847-524-6
15	43	70.5	197	12	US-10-352-153-8

16	43	70.5	280	13	US-10-044-622-1	Sequence 1, Appli
17	43	70.5	321	10	US-09-847-524-4	Sequence 4, Appli
18	43	70.5	321	14	US-10-274-953-9	Sequence 9, Appli
19	43	70.5	321	14	US-10-161-694-9	Sequence 9, Appli
20	43	70.5	325	14	US-10-274-953-3	Sequence 3, Appli
21	43	70.5	325	14	US-10-161-694-3	Sequence 3, Appli
22	43	70.5	354	9	US-09-956-095-2	Sequence 2, Appli
23	43	70.5	354	9	US-09-219-345A-11	Sequence 11, Appli
24	43	70.5	354	9	US-09-795-006A-119	Sequence 119, App
25	43	70.5	354	10	US-09-375-248-6	Sequence 6, Appli
26	43	70.5	354	12	US-09-765-534B-22	Sequence 22, Appli
27	43	70.5	354	12	US-10-661-740-6	Sequence 6, Appli
28	43	70.5	354	14	US-10-262-538-26	Sequence 26, Appli
29	43	70.5	354	14	US-10-274-953-5	Sequence 5, Appli
30	43	70.5	354	14	US-10-161-694-5	Sequence 5, Appli
31	43	70.5	354	14	US-10-174-930-1	Sequence 1, Appli
32	43	70.5	358	9	US-09-852-209A-13	Sequence 13, Appli
33	43	70.5	358	10	US-09-847-524-2	Sequence 2, Appli
34	43	70.5	358	12	US-10-439-337A-13	Sequence 13, Appli
35	43	70.5	358	12	US-10-303-997B-13	Sequence 13, Appli
36	43	70.5	358	13	US-10-139-876-2	Sequence 2, Appli
37	43	70.5	358	14	US-10-131-600-13	Sequence 13, Appli
38	43	70.5	358	14	US-10-274-953-8	Sequence 8, Appli
39	43	70.5	358	14	US-10-161-694-8	Sequence 8, Appli
40	43	70.5	362	13	US-10-139-876-4	Sequence 4, Appli
41	42	68.9	39	14	US-10-195-730-172	Sequence 172, App
42	42	68.9	39	16	US-10-799-747-172	Sequence 172, App
43	41	67.2	9	9	US-09-761-636A-14	Sequence 14, Appli
44	40	65.6	80	12	US-10-206-915-576	Sequence 576, App
45	40	65.6	80	12	US-10-199-670-576	Sequence 576, App

ALIGNMENTS

RESULT 1
US-09-761-636A-7
; Sequence 7, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDROW, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 7
; LENGTH: 11
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-761-636A-7

Query Match 100.0%; Score 61; DB 9; Length 11;
Best Local Similarity 100.0%; Pred. No. 0.0036;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CISVPLTSVPC 11
Db 1 CISVPLTSVPC 11

RESULT 2
US-09-761-636A-23
; Sequence 23, Application US/09761636A
; Patent No. US20020065218A1

```

; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 23
; LENGTH: 11
; TYPE: PRT
; ORGANISM: synthetic construct
; US-09-761-636A-23

Query Match      96.7%; Score 59; DB 9; Length 11;
Best Local Similarity 90.9%; Pred. No. 0.0074;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTSVPLTSVPC 11
Db 1 CLSVPLTSVPC 11

RESULT 3
US-09-761-636A-26
; Sequence 26, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 26
; LENGTH: 11
; TYPE: PRT
; ORGANISM: synthetic construct
; US-09-761-636A-26

Query Match      93.4%; Score 57; DB 9; Length 11;
Best Local Similarity 81.8%; Pred. No. 0.015;
Matches 9; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTSVPLTSVPC 11
Db 1 CUSVPLTSVPC 11

RESULT 4
US-09-761-636A-24
; Sequence 24, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 24
; LENGTH: 11
; TYPE: PRT
; ORGANISM: synthetic construct
; US-09-761-636A-24

Query Match      88.5%; Score 54; DB 9; Length 11;
Best Local Similarity 72.7%; Pred. No. 0.046;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTSVPLTSVPC 11
Db 1 CITIPLTSVPC 11

RESULT 5
US-09-761-636A-25
; Sequence 25, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 25
; LENGTH: 11
; TYPE: PRT
; ORGANISM: synthetic construct
; US-09-761-636A-25

Query Match      85.2%; Score 52; DB 9; Length 11;
Best Local Similarity 72.7%; Pred. No. 0.095;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTSVPLTSVPC 11
Db 1 CISLPISSVPC 11

RESULT 6
US-09-761-636A-13
; Sequence 13, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 13
; LENGTH: 11
; TYPE: PRT
; ORGANISM: synthetic construct
; US-09-761-636A-13

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; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 13
; LENGTH: 10
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-761-636A-13

Query Match 74.6%; Score 45.5; DB 9; Length 10;
Best Local Similarity 90.9%; Pred. No. 0.93;
Matches 10; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 1 CISVPLTSVPC 11
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Db 1 CISVPL-SVPC 10

RESULT 7
US-10-139-876-11
; Sequence 11, Application US/10139876
; Publication No. US20020123481A1
; GENERAL INFORMATION:
; APPLICANT: Oliviero, Salvatore
; TITLE OF INVENTION: C-Fos Induced Growth Factor (Figf) And Dna Encoding Same
; FILE REFERENCE: 35784/205172
; CURRENT APPLICATION NUMBER: US/10/139,876
; PRIOR FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/043,476
; PRIOR FILING DATE: 1998-03-18
; PRIOR APPLICATION NUMBER: PCT/IB96/0113
; PRIOR FILING DATE: 1996-09-30
; PRIOR APPLICATION NUMBER: GB9612368.2
; PRIOR FILING DATE: 1996-06-13
; PRIOR APPLICATION NUMBER: GB9519928.7
; PRIOR FILING DATE: 1995-09-29
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 49
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: PEPTIDE
; LOCATION: (1)...(48)
; OTHER INFORMATION: segment of FIGF
US-10-139-876-11

Query Match 70.5%; Score 43; DB 13; Length 49;
Best Local Similarity 100.0%; Pred. No. 11;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ISVPLTSVP 10
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Db 23 ISVPLTSVP 31

RESULT 8
US-10-086-623-18
; Sequence 18, Application US/10086623
; Publication No. US20020164710A1
; GENERAL INFORMATION:
; APPLICANT: ERIKSSON, Ulf
; APPLICANT: AASE, Karin
; APPLICANT: LI, Xuri
; APPLICANT: PONTEN, Annica
; APPLICANT: UUTELA, Marko
; APPLICANT: ALITALO, Kari
; APPLICANT: OESTMAN, Arne
; APPLICANT: HELDIN, Carl-Henrik
; TITLE OF INVENTION: PLATELET DERIVED GROWTH FACTOR D, DNA CODING THEREFOR AND USES TH

; FILE REFERENCE: 1064/44833C2
; CURRENT APPLICATION NUMBER: US/10/086,623
; CURRENT FILING DATE: 2000-03-04
; PRIOR APPLICATION NUMBER: US 60/107,852
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 60/113,997
; PRIOR FILING DATE: 1998-12-28
; PRIOR APPLICATION NUMBER: US 60/150,604
; PRIOR FILING DATE: 1999-08-26
; PRIOR APPLICATION NUMBER: US 60/157,108
; PRIOR FILING DATE: 1999-10-04
; PRIOR APPLICATION NUMBER: US 60/157,756
; PRIOR FILING DATE: 1999-10-05
; PRIOR APPLICATION NUMBER: US 09/438,046
; PRIOR FILING DATE: 1999-11-10
; PRIOR APPLICATION NUMBER: US 09/691,200
; PRIOR FILING DATE: 2000-10-19
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 18
; LENGTH: 81
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: PDGF/VEGF-homology domain of VEGF-D
US-10-086-623-18

Query Match 70.5%; Score 43; DB 13; Length 81;
Best Local Similarity 100.0%; Pred. No. 18;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ISVPLTSVP 10
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Db 58 ISVPLTSVP 66

RESULT 9
US-10-260-539-18
; Sequence 18, Application US/10260539
; Publication No. US20030073637A1
; GENERAL INFORMATION:
; APPLICANT: ERIKSSON, Ulf
; APPLICANT: AASE, Karin
; APPLICANT: LI, Xuri
; APPLICANT: PONTEN, Annica
; APPLICANT: UUTELA, Marko
; APPLICANT: ALITALO, Kari
; APPLICANT: OESTMAN, Arne
; APPLICANT: HELDIN, Carl-Henrik
; TITLE OF INVENTION: PLATELET DERIVED GROWTH FACTOR D, DNA CODING THEREFOR AND USES TH
; FILE REFERENCE: 1064/44833C2
; CURRENT APPLICATION NUMBER: US/10/260,539
; CURRENT FILING DATE: 2002-10-01
; PRIOR APPLICATION NUMBER: US/10/086,623
; PRIOR FILING DATE: 2000-03-04
; PRIOR APPLICATION NUMBER: US 60/107,852
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 60/113,997
; PRIOR FILING DATE: 1998-12-28
; PRIOR APPLICATION NUMBER: US 60/150,604
; PRIOR FILING DATE: 1999-08-26
; PRIOR APPLICATION NUMBER: US 60/157,108
; PRIOR FILING DATE: 1999-10-04
; PRIOR APPLICATION NUMBER: US 60/157,756
; PRIOR FILING DATE: 1999-10-05
; PRIOR APPLICATION NUMBER: US 09/438,046
; PRIOR FILING DATE: 1999-11-10
; PRIOR APPLICATION NUMBER: US 09/691,200
; PRIOR FILING DATE: 2000-10-19
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 18

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; LENGTH: 81
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: PDGF/VEGF-homology domain of VEGF-D
US-10-260-539-18

Query Match          70.5%; Score 43; DB 14; Length 81;
Best Local Similarity 100.0%; Pred. No. 18;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ISVPLTSVP 10
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Db 58 ISVPLTSVP 66

RESULT 10
US-09-761-636A-1
; Sequence 1, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 96
; TYPE: PRT
; ORGANISM: Homo sapiens
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues of Val101-Pro196 of VEGF-D
US-09-761-636A-1

Query Match          70.5%; Score 43; DB 9; Length 96;
Best Local Similarity 100.0%; Pred. No. 22;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ISVPLTSVP 10
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Db 68 ISVPLTSVP 76

RESULT 11
US-09-956-095-3
; Sequence 3, Application US/09956095
; Patent No. US20020102260A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steven A.
; TITLE OF INVENTION: METHODS FOR TREATING NEOPLASTIC DISEASE CHARACTERIZED BY
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR D EXPRESSION FOR SCREENING
; TITLE OF INVENTION: FOR NEOPLASTIC DISEASE OR METASTATIC RISK AND FOR MAINTAINING
; TITLE OF INVENTION: VASCULARIZATION OF TISSUE
; FILE REFERENCE: 1064/48666PC
; CURRENT APPLICATION NUMBER: US/09/956,095
; CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 09/796,714
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/234,196
; PRIOR FILING DATE: 2000-09-20
; NUMBER OF SEQ ID NOS: 4

; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
; OTHER INFORMATION: PDGF/VEGF-homology domain of VEGF-D
US-09-956-095-3

Query Match          70.5%; Score 43; DB 9; Length 109;
Best Local Similarity 100.0%; Pred. No. 24;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ISVPLTSVP 10
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Db 76 ISVPLTSVP 84

RESULT 12
US-09-219-345A-1
; Sequence 1, Application US/09219345A
; Patent No. US20020127222A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; TITLE OF INVENTION: EXPRESSION VECTORS AND CELL LINES EXPRESSING VASCULAR
; TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR D, AND METHOD OF TREATING
; FILE REFERENCE: 1064/44385 Marc ACHEN
; CURRENT APPLICATION NUMBER: US/09/219,345A
; CURRENT FILING DATE: 1998-12-23
; PRIOR APPLICATION NUMBER: AU PP 1131
; PRIOR FILING DATE: 1997-12-24
; PRIOR APPLICATION NUMBER: US 60/087,392
; PRIOR FILING DATE: 1998-05-29
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-219-345A-1

Query Match          70.5%; Score 43; DB 9; Length 109;
Best Local Similarity 100.0%; Pred. No. 24;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 ISVPLTSVP 10
   |||||
Db 76 ISVPLTSVP 84

RESULT 13
US-10-779-731-1
; Sequence 1, Application US/10779731
; Publication No. US20040141917A1
; GENERAL INFORMATION:
; APPLICANT: STACKER, Steve A.
; APPLICANT: ACHEN, Marc G.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USBS THEREOF
; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/10/779,731
; CURRENT FILING DATE: 2004-02-18
; PRIOR APPLICATION NUMBER: US/10/100,037
; PRIOR FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: 09/469,186
; PRIOR FILING DATE: 1999-12-21
; PRIOR APPLICATION NUMBER: 60/113,254
; PRIOR FILING DATE: 1998-12-21
; PRIOR APPLICATION NUMBER: 60/134,556
; PRIOR FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT

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; ORGANISM: Homo sapiens
US-10-779-731-1
Query Match 70.5%; Score 43; DB 16; Length 109;
Best Local Similarity 100.0%; Pred. No. 24;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 2 ISVPLTSVP 10
Db 76 ISVPLTSVP 84
Search completed: September 5, 2004, 10:29:18
Job time : 30.8889 secs

RESULT 14
US-09-847-524-6
; Sequence 6, Application US/09847524
; Publication No. US20030166523A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G
; APPLICANT: STACKER, Steven A
; TITLE OF INVENTION: A METHOD FOR ACTIVATING ONLY THE VASCULAR ENDOTHELIAL
; TITLE OF INVENTION: GROWTH FACTOR RECEPTOR-3 AND USES THEREOF
; FILE REFERENCE: Achen&Stacker-mouse VEGF-D
; CURRENT APPLICATION NUMBER: US/09/847,524
; CURRENT FILING DATE: 2001-05-03
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 110
; TYPE: PRT
; ORGANISM: Murinae gen. sp.
US-09-847-524-6

Query Match 70.5%; Score 43; DB 10; Length 110;
Best Local Similarity 100.0%; Pred. No. 25;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 2 ISVPLTSVP 10
Db 77 ISVPLTSVP 85

RESULT 15
US-10-352-153-8
; Sequence 8, Application US/10352153
; Publication No. US20030211101A1
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stackler, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N23 BINDS AND ACTIVATES MAMMALIAN VEGF
; FILE REFERENCE: RECEPTOR-2, AND USES THEREOF
; CURRENT APPLICATION NUMBER: US/10/352,153
; CURRENT FILING DATE: 2003-01-28
; PRIOR APPLICATION NUMBER: US/09/431,888A
; PRIOR FILING DATE: 1999-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,689
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,800
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-352-153-8

Query Match 70.5%; Score 43; DB 12; Length 197;
Best Local Similarity 100.0%; Pred. No. 44;

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:55:30 ; Search time 9.77778 Seconds
(without alignments)
58.079 Million cell updates/sec

Title: US-09-761-636A-7
Perfect score: 61
Sequence: 1 C1SVPLTSVPC 11

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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- 2: /cgn2_6/prodata/2/iaa/5B COMB.pcp.*
- 3: /cgn2_6/prodata/2/iaa/6A COMB.pcp.*
- 4: /cgn2_6/prodata/2/iaa/6B COMB.pcp.*
- 5: /cgn2_6/prodata/2/iaa/PCUS COMB.pcp.*
- 6: /cgn2_6/prodata/2/iaa/backfiles1.pcp.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	43	70.5	109	4	US-09-469-186-1
2	43	70.5	109	4	US-09-469-185-1
3	43	70.5	197	4	US-09-431-888-8
4	43	70.5	321	3	US-08-915-795-9
5	43	70.5	325	3	US-08-915-795-3
6	43	70.5	354	3	US-08-915-795-5
7	43	70.5	358	3	US-08-915-795-8
8	40	65.6	79	4	US-09-134-000C-4906
9	38	62.3	663	3	US-08-959-004-5
10	37	60.7	600	4	US-09-328-352-7636
11	37	60.7	1248	4	US-10-042-810-2
12	37	60.7	1278	4	US-10-042-810-4
13	36	59.0	388	3	US-08-861-774E-94
14	36	59.0	409	4	US-09-252-991A-17910
15	36	59.0	533	4	US-09-508-370A-6
16	36	59.0	534	4	US-09-508-370A-5
17	35	57.4	90	6	5220013-24
18	35	57.4	147	4	US-09-252-991A-23997
19	35	57.4	150	4	US-09-252-991A-29818
20	35	57.4	193	4	US-08-635-886C-227
21	35	57.4	193	4	US-08-635-886C-227
22	35	57.4	207	4	US-08-134-231C-22
23	35	57.4	207	4	US-08-728-160-22
24	35	57.4	208	3	US-08-613-973-32
25	35	57.4	208	3	US-08-927-597-32
26	35	57.4	299	2	US-08-923-856-1
27	35	57.4	299	3	US-09-216-294-1

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28 35 57.4 319 4 US-08-635-886C-202 Sequence 202, App
29 35 57.4 319 4 US-08-635-886C-226 Sequence 226, App
30 35 57.4 319 4 US-08-974-690C-202 Sequence 202, App
31 35 57.4 319 4 US-08-974-690C-226 Sequence 226, App
32 35 57.4 363 1 US-08-484-105-20 Sequence 20, Appl
33 35 57.4 363 1 US-08-484-106-20 Sequence 20, Appl
34 35 57.4 1342 4 US-09-561-709B-13 Sequence 13, Appl
35 34 55.7 22 4 US-09-227-357-517 Sequence 517, App
36 34 55.7 38 1 US-08-176-500-111 Sequence 111, App
37 34 55.7 38 1 US-08-471-052A-111 Sequence 111, App
38 34 55.7 38 2 US-08-189-331-111 Sequence 111, App
39 34 55.7 38 2 US-08-471-939-111 Sequence 111, App
40 34 55.7 38 2 US-08-471-800-111 Sequence 111, App
41 34 55.7 38 2 US-08-471-068-111 Sequence 111, App
42 34 55.7 72 3 US-08-722-719-58 Sequence 58, Appl
43 34 55.7 72 4 US-09-334-951-58 Sequence 58, Appl
44 34 55.7 72 4 US-09-334-923A-58 Sequence 58, Appl
45 34 55.7 72 4 US-09-334-954A-58 Sequence 58, Appl

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ALIGNMENTS

RESULT 1

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US-09-469-186-1
; Sequence 1, Application US/09469186
; Patent No. 6383484
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/09/469,186
; EARLIER FILING DATE: 1999-12-21
; EARLIER APPLICATION NUMBER: 60/113,254
; EARLIER FILING DATE: 1998-12-21
; EARLIER APPLICATION NUMBER: 60/134,556
; EARLIER FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-469-186-1

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Query Match 70.5%; Score 43; DB 4; Length 109;
Best Local Similarity 100.0%; Pred.No.5.8;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 2 ISVPLTSVP 10
DB 76 ISVPLTSVP 84

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RESULT 2

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US-09-469-185-1
; Sequence 1, Application US/09469185
; Patent No. 6531185
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steve A.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/09/469,185
; CURRENT FILING DATE: 1999-12-21
; EARLIER APPLICATION NUMBER: 60/113,254
; EARLIER FILING DATE: 1998-12-21
; EARLIER APPLICATION NUMBER: 60/134,556
; EARLIER FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1

```


;; STRANDEDNESS: single
 ;; TOPOLOGY: linear
 ;; MOLECULE TYPE: protein
 ;; HYPOTHETICAL: NO
 ;; ORIGINAL SOURCE:
 ;; TISSUE TYPE: Human Breast
 US-08-915-795-3

Query Match 70.5%; Score 43; DB 3; Length 325;
 Best Local Similarity 100.0%; Pred. No. 18;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ISVPLTSVP 10
 Db 139 ISVPLTSVP 147

RESULT 6

US-08-915-795-5
 ; Sequence 5, Application US/08915795
 ; Patent No. 6235713
 ; GENERAL INFORMATION:
 ; APPLICANT: Marc G. ACHEN
 ; APPLICANT: Andrew F. WILKS
 ; APPLICANT: Steven A. STACKER
 ; APPLICANT: Kari ALITALO
 ; TITLE OF INVENTION: GROWTH FACTOR
 ; NUMBER OF SEQUENCES: 11
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
 ; STREET: 1200 G Street, NW, Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: United States of America
 ; ZIP: 20005

COMPUTER READABLE FORM:
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/915,795
 FILING DATE:
 CLASSIFICATION: 536
 ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D.
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 1064/42983
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 TELEX: N/A

INFORMATION FOR SEQ ID NO: 5:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 354 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: Human Lung
 US-08-915-795-5

Query Match 70.5%; Score 43; DB 3; Length 354;
 Best Local Similarity 100.0%; Pred. No. 20;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ISVPLTSVP 10
 Db 168 ISVPLTSVP 176

RESULT 7

US-08-915-795-8
 ; Sequence 8, Application US/08915795
 ; Patent No. 6235713
 ; GENERAL INFORMATION:
 ; APPLICANT: Marc G. ACHEN
 ; APPLICANT: Andrew F. WILKS
 ; APPLICANT: Steven A. STACKER
 ; APPLICANT: Kari ALITALO
 ; TITLE OF INVENTION: GROWTH FACTOR
 ; NUMBER OF SEQUENCES: 11
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
 ; STREET: 1200 G Street, NW, Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: United States of America
 ; ZIP: 20005

COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/915,795
 FILING DATE:
 CLASSIFICATION: 536

ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D.
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 1064/42983
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 TELEX: N/A

INFORMATION FOR SEQ ID NO: 8:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 358 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 ORIGINAL SOURCE:
 TISSUE TYPE: Mouse Lung
 US-08-915-795-8

Query Match 70.5%; Score 43; DB 3; Length 358;
 Best Local Similarity 100.0%; Pred. No. 20;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 ISVPLTSVP 10
 Db 173 ISVPLTSVP 181

RESULT 8

US-08-134-000C-4906
 ; Sequence 4906, Application US/09134000C
 ; Patent No. 6617156
 ; GENERAL INFORMATION:

APPLICANT: Lynn Doucette-Stamm et al
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
 FILE REFERENCE: 032796-032
 CURRENT APPLICATION NUMBER: US/09/134,000C
 CURRENT FILING DATE: 1998-08-13
 PRIOR APPLICATION NUMBER: US 60/055,778
 PRIOR FILING DATE: 1997-08-15
 NUMBER OF SEQ ID NOS: 6812
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 4906
 LENGTH: 79
 TYPE: PRT

ORGANISM: Enterococcus faecalis
FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (10)-(15)
OTHER INFORMATION: Amino acids 10 & 15 are Xaa wherein Xaa = any amino acid.
US-09-134-000C-4906

Query Match 65.6%; Score 40; DB 4; Length 79;
Best Local Similarity 70.0%; Pred. No. 12;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 CISVPLTSVP 10
Db 66 CITVPLTAKP 75

RESULT 9
US-08-959-004-5
Sequence 5, Application US/08959004
Patent No. 6197543
GENERAL INFORMATION:
APPLICANT: Hillman, Jennifer L.
APPLICANT: Yue, Henry
APPLICANT: Corley, Neil C.
APPLICANT: Lal, Preeti
APPLICANT: Shah, Purvi
APPLICANT: Kaser, Matthew
TITLE OF INVENTION: HUMAN VESICLE MEMBRANE PROTEIN-LIKE
TITLE OF INVENTION: PROTEINS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Drive
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA: US/08/959,004
FILING DATE: Herewith
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0414 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-855-0555
TELEFAX: 650-845-4166
TELEX:
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 663 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: ADRETUT06
CLONE: 2822412
US-08-959-004-5

Query Match 62.3%; Score 38; DB 3; Length 663;
Best Local Similarity 77.8%; Pred. No. 2.4e+02;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CISVPLTSV 9

Db 479 CISVPLTFI 487

RESULT 10
US-09-328-352-7636
Sequence 7636, Application US/09328352
Patent No. 6562958
GENERAL INFORMATION:
APPLICANT: Gary L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER
TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: GTC99-03PA
CURRENT APPLICATION NUMBER: US/09/328,352
CURRENT FILING DATE: 1999-06-04
NUMBER OF SEQ ID NOS: 8252
SEQ ID NO 7636
LENGTH: 600
TYPE: PRT
ORGANISM: Acinetobacter baumannii
US-09-328-352-7636

Query Match 60.7%; Score 37; DB 4; Length 600;
Best Local Similarity 60.0%; Pred. No. 3.1e+02;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 2 ISVPLTSVPC 11
Db 19 LSAITSVPC 28

RESULT 11
US-10-042-810-2
Sequence 2, Application US/10042810
Patent No. 6570003
GENERAL INFORMATION:
APPLICANT: Hu, Yi
APPLICANT: Burnett, Michael
APPLICANT: Zambrowicz, Brian
TITLE OF INVENTION: No. 6570003el Human 7TM Proteins and Polynucleotides Encoding th
FILE REFERENCE: LEX-0297-USA
CURRENT APPLICATION NUMBER: US/10/042,810
CURRENT FILING DATE: 2002-01-09
PRIOR APPLICATION NUMBER: US 60/261,624
PRIOR FILING DATE: 2001-01-09
NUMBER OF SEQ ID NOS: 5
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 1248
TYPE: PRT
ORGANISM: homo sapiens
US-10-042-810-2

Query Match 60.7%; Score 37; DB 4; Length 1248;
Best Local Similarity 60.0%; Pred. No. 6.6e+02;
Matches 6; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 CISVPLTSVP 10
Db 320 CLOYPFTSVP 329

RESULT 12
US-10-042-810-4
Sequence 4, Application US/10042810
Patent No. 6570003
GENERAL INFORMATION:
APPLICANT: Hu, Yi
APPLICANT: Burnett, Michael
APPLICANT: Zambrowicz, Brian
TITLE OF INVENTION: No. 6570003el Human 7TM Proteins and Polynucleotides Encoding th
FILE REFERENCE: LEX-0297-USA
CURRENT APPLICATION NUMBER: US/10/042,810

Query Match 62.3%; Score 38; DB 3; Length 663;
Best Local Similarity 77.8%; Pred. No. 2.4e+02;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CISVPLTSV 9


```
; CURRENT FILING DATE: 2002-01-09
; PRIOR APPLICATION NUMBER: US 60/261,624
; PRIOR FILING DATE: 2001-01-09
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: Fast-SEQ for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 1278
; TYPE: PRT
; ORGANISM: homo sapiens
US-10-042-810-4

Query Match      60.7%; Score 37; DB 4; Length 1278;
Best Local Similarity 60.0%; Pred. No. 6.8e+02;
Matches 6; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 C1SVPLTSVP 10
Db 320 CLQYPTSV 329

RESULT 13
US-08-861-774E-94
; Sequence 94, Application US/08861774E
; Patent No. 6297007
; GENERAL INFORMATION:
; APPLICANT: Waters, Barbara
; APPLICANT: Miao, Vivian
; APPLICANT: Ho, Yap
; APPLICANT: Tong, Seow
; TITLE OF INVENTION: METHOD FOR ISOLATION OF BIOSYNTHESIS GENES FOR
; FILE REFERENCE: 9993-006
; CURRENT APPLICATION NUMBER: US/08/861,774E
; CURRENT FILING DATE: 1997-05-22
; NUMBER OF SEQ ID NOS: 94
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 94
; LENGTH: 388
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Clone ps3
US-08-861-774E-94

Query Match      59.0%; Score 36; DB 3; Length 388;
Best Local Similarity 77.8%; Pred. No. 2.8e+02;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 2 ISVPLTSVP 10
Db 318 VIVPLTSVP 326

RESULT 14
US-09-252-991A-17910
; Sequence 17910, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
; APPLICANT: Marc J. Rubenfield et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 107196.136
; CURRENT APPLICATION NUMBER: US/09/252,991A
; CURRENT FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: US 60/094,190
; PRIOR FILING DATE: 1998-07-27
; NUMBER OF SEQ ID NOS: 33142
; SEQ ID NO 17910
; LENGTH: 409
; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
```

US-09-252-991A-17910

Query Match 59.0%; Score 36; DB 4; Length 409;
Best Local Similarity 60.0%; Pred. No. 3e+02;
Matches 6; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 2 ISVPLTSVPC 11
Db 42 VSAPCTVVPC 51

RESULT 15

US-09-508-370A-6
; Sequence 6, Application US/09508370A
; Patent No. 6492131
; GENERAL INFORMATION:
; APPLICANT: Dieter Soll
; APPLICANT: Michael Ibba
; TITLE OF INVENTION: Class I-type Lysyl-tRNA Synthetase
; FILE REFERENCE: OCR-896
; CURRENT APPLICATION NUMBER: US/09/508,370A
; CURRENT FILING DATE: 2000-03-10
; PRIOR APPLICATION NUMBER: PCT/US98/18968
; PRIOR FILING DATE: 1998-09-09
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: MS Dos
; SEQ ID NO 6
; LENGTH: 533
; TYPE: PRT
; ORGANISM: Methanococcus maripaludis
; FEATURE:
; NAME/KEY: lysyl t-RNA synthetase
; OTHER INFORMATION: construct expressed in Example 1
US-09-508-370A-6

Query Match 59.0%; Score 36; DB 4; Length 533;
Best Local Similarity 50.0%; Pred. No. 3.9e+02;
Matches 5; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 2 ISVPLTSVPC 11
Db 84 IGMPLSEIPC 93

Search completed: September 5, 2004, 10:21:57
Job time : 10.7778 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:47:29 ; Search time 13.0505 Seconds
(without alignments)
125.302 Million cell updates/sec

Title: US-09-761-636A-8

Perfect score: 100

Sequence: 1 CASELGKSTNTFCPPC 17

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 78:*

1: Piri:*

2: Pir2:*

3: Pir3:*

4: Pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	58	58.0	419	2	S69207
2	48	48.0	211	1	XUBSWM
3	48	48.0	330	2	T25169
4	45	45.0	371	2	B96614
5	44	44.0	1717	1	A45558
6	43	43.0	100	2	D71882
7	43	43.0	104	2	A39035
8	43	43.0	693	2	S64904
9	42	42.0	1428	2	T08852
10	41	41.0	223	2	B38346
11	41	41.0	230	2	A38346
12	41	41.0	319	2	A84947
13	41	41.0	335	2	B45511
14	41	41.0	397	2	AC1574
15	41	41.0	397	2	AH1220
16	41	41.0	406	2	T30748
17	41	41.0	439	2	S33293
18	41	41.0	476	2	F88968
19	41	41.0	570	2	T37314
20	41	41.0	585	2	C69336
21	41	41.0	642	1	Q08B95
22	41	41.0	669	2	S65551
23	41	41.0	815	2	T05555
24	41	41.0	942	2	D87803
25	41	41.0	988	1	S35362
26	41	41.0	1174	2	T43051
27	41	41.0	1294	2	S77690
28	41	41.0	1277	2	E97808
29	40	40.0	126	2	S30858

30 40 40.0 224 2 H70717
31 40 40.0 352 1 XYEBOT
32 40 40.0 353 2 AG0789
33 40 40.0 383 2 T17722
34 40 40.0 399 2 G96556
35 40 40.0 452 2 G82390
36 40 40.0 472 2 G81325
37 40 40.0 526 2 A43567
38 40 40.0 550 2 A41585
39 40 40.0 575 2 A47214
40 40 40.0 594 2 A42770
41 40 40.0 596 2 F84589
42 40 40.0 649 2 T33741
43 40 40.0 833 1 S20387
44 40 40.0 833 2 T14703
45 40 40.0 1057 2 T15720

hypothetical prote
methylated-DNA- [pr
methylated-DNA- [pr
hypothetical prote
hypothetical prote
ada regulatory pro
Glu-GRNAGln amidot
J-kappa recombinat
J-kappa recombinat
JK-recombination s
Suppressor of Hair
probable protein k
DNA-binding protei
outer membrane pro
F1 capsule anchori
hypothetical prote

ALIGNMENTS

RESULT 1

S69207

vascular endothelial growth factor C precursor - human

N:Alternate names: FLT4 ligand DHM

C:Species: Homo sapiens (man)

C>Date: 27-Apr-1996 #sequence revision 01-Nov-1996 #text_change 08-Oct-1999

C:Accession: S69207; S61795; S71443; S69208; G02659

R:Joukov, V.; Pajusola, K.; Kaipainen, A.; Chilov, D.; Lahtinen, I.; Kuk, E.; Saksela, EMBO J. 15, 1751, 1996

A:Title: Corrigendum: A novel vascular endothelial growth factor, VEGF-C, is a ligand fo

A:Reference number: S69207; MUID:96203094; PMID:8612600

A:Accession: S69207

A:Status: nucleic acid sequence not shown

A:Molecule type: mRNA

A:Residues: 1-419 <JOU>

A:Cross-references: EMBL:X94216; NID:g1177488; PIDN:CAA63907.1; PID:g221096; PID:g118200

A:Note: the nucleotide sequence was submitted to the EMBL Data Library, December 1995

A:Note: only a part of the translation is shown

A:Note: this is a revision to the sequence from reference S61795

R:Joukov, V.; Pajusola, K.; Kaipainen, A.; Chilov, D.; Lahtinen, I.; Kuk, E.; Saksela, EMBO J. 15, 290-298, 1996

A:Title: A novel vascular endothelial growth factor, VEGF-C, is a ligand for the Flt4 (V

A:Reference number: S61795; MUID:96178224; PMID:8617204

A:Accession: S61795

A:Status: nucleic acid sequence not shown; not compared with conceptual translation

A:Molecule type: mRNA

A:Residues: 70-419 <JOU1>

A:Note: this sequence has been revised in reference S69207

A:Accession: S71443

A:Molecule type: protein

A:Residues: 'X', 104-120 <JOU2>

R:Lee, J.; Gray, A.; Yuan, J.; Luoh, S.M.; Avraham, H.; Wood, W.I.

submitted to the EMBL Data Library, December 1995

A:Description: Vascular endothelial growth factor related protein (VRP): A ligand and sp

A:Reference number: S69208

A:Accession: S69208

A:Molecule type: mRNA

A:Residues: 1-419 <LEE>

A:Cross-references: EMBL:U43142; NID:g1150988; PIDN:AAA85214.1; PID:g1150989

submitted to the EMBL Data Library, May 1996

A:Reference number: H01557

A:Accession: G02659

A:Status: preliminary; translated from GB/EMBL/DBD

A:Molecule type: mRNA

A:Residues: 1-419 <MOR>

A:Cross-references: EMBL:U58111; NID:g1373426; PIDN:AA02909.1; PID:g1373427

C:Genetics:

A:Gene: GDB:VRGFC; VRP

A:Cross-references: GDB:3890883; OMIM:601528

F:1-12/Domain: signal sequence #status predicted <SIG>

F:13-102/Domain: propeptide #status predicted <PRO>

F:103-419/Product: vascular endothelial growth factor C #status experimental <MAT>

Query Match 58.0%; Score 58; DB 2; Length 419;
Best Local Similarity 71.4%; Pred. No. 0.23;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELGKSTNTFCPPC 17
| | | | |
DB 143 EFGVATNTFFCKPC 156

RESULT 2
XUBSMW
C:Species: Bacillus subtilis
C:Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 16-Jun-2000
C:Accession: S11483; F69582
R:Morohoshi, F.; Hayashi, K.; Munakata, N.
Nucleic Acids Res. 18, 5473-5480, 1990
A:Title: Bacillus subtilis ada operon encodes two DNA alkyltransferases.
A:Reference number: S11483; MUID:91016831; PMID:2120677
A:Accession: S11483
A:Molecule type: DNA
A:Residues: 1-211 <MOR>
A:Cross-references: EMBL:X53399; NID:g39786; PIDN:CAA37475.1; PID:g39787
R:Kunst, F.; Ogasawara, N.; Moser, I.; Albertini, A.M.; Allioni, G.; Azevedo, V.; Berte
C.; Bron, S.; Brouillet, C.V.; Bruchsi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Ch
A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrar, E.
Nature 390, 249-256, 1997
A:Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Gall
lech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hulio, M.P.
Koetter, P.; Konigstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois
A:Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maues
Y, M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetel
Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon
A:Authors: Schleich, S.; Schroeter, R.; Scoffone, P.; Segiguchi, J.; Sekowska, A.; Seron
akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Toato, V.; Uchiyama
T.; Winters, P.; Wipat, A.; Yamamoto, H.; Yamane, K.; Yasumoto, K.; Yata, K.; Yoshida, K
A:Title: The complete genome sequence of the Gram-positive bacterium Bacillus subtilis.
A:Reference number: A69580; MUID:98044033; PMID:9384377
A:Accession: F69582
A:Status: nucleic acid sequence not shown; translation not shown

A:Molecule type: DNA
A:Residues: 1-211 <KUN>
A:Cross-references: GB:Z99104; GB:Z99105; GB:AL009126; NID:g2632457; PIDN:CAB11974.1; PI
A:Experimental source: strain 168
C:Genetics:
A:Gene: adaA
C:Superfamily: methylphosphotriester-DNA methyltransferase; methylphosphotriester-DNA me
C:Keywords: DNA binding; DNA repair; methyltransferase; transcription regulation
F:23-207/Domain: methylphosphotriester-DNA methyltransferase homology <MP>
Query Match 48.0%; Score 48; DB 1; Length 211;
Best Local Similarity 72.7%; Pred. No. 4.5;
Matches 8; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 7 KSTNTFCPPC 17
| | | | |
DB 48 KSTGTFCKPC 58

RESULT 3
T25169
hypothetical protein T23F1.6 - Caenorhabditis elegans
C:Species: Caenorhabditis elegans
C:Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 21-Jan-2000
C:Accession: T25169
R:Wilkinson, J.
submitted to the EMBL Data Library, October 1996
A:Reference number: Z19990
A:Accession: T25169
A:Status: preliminary; translated from GB/EMBL/DBJ

A:Molecule type: DNA
A:Residues: 1-330 <WIL>
A:Cross-references: EMBL:Z81129; PIDN:CAB03405.1; GSPDB:GN00023; CESP:T23F1.6
A:Experimental source: clone T23F1
C:Genetics:
A:Gene: CESP:T23F1.6
A:Map position: 5
A:Introns: 16/3
C:Superfamily: gliadin

Query Match 48.0%; Score 48; DB 2; Length 330;
Best Local Similarity 41.2%; Pred. No. 6.6;
Matches 7; Conservative 4; Mismatches 6; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCPPC 17
| | | | |
DB 80 CSQQCQSNINTOCQPTC 96

RESULT 4
B96614
hypothetical protein T15M6.10 [imported] - Arabidopsis thaliana
C:Species: Arabidopsis thaliana (mouse-ear cress)
C:Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 23-Mar-2001
C:Accession: B96614
R:Theologidis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso,
Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.;
ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A:Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C
C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali,
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A:Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon,
ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A:Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A:Reference number: A86141; MUID:21016719; PMID:11130712
A:Accession: B96614
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-371 <STO>
A:Cross-references: GB:AE005173; NID:g11067306; PIDN:AAG28833.1; GSPDB:GN00141
C:Genetics:
A:Gene: T15M6.10
A:Map position: 1
C:Superfamily: Arabidopsis thaliana hypothetical protein F24M12.210

Query Match 45.0%; Score 45; DB 2; Length 371;
Best Local Similarity 50.0%; Pred. No. 21;
Matches 8; Conservative 2; Mismatches 6; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFCPPC 17
| | | | |
DB 224 SKIEKSRKTFCVLP 239

RESULT 5
A45558
epidermal growth factor receptor homolog precursor - fluke (Schistosoma mansoni)
N:Contains: protein-tyrosine kinase (EC 2.7.1.112)
C:Species: Schistosoma mansoni
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C:Accession: A45558; S27836
R:Shoemaker, C.B.; Ramchandran, H.; Landa, A.; dos Reis, M.G.; Stein, L.D.
Mol. Biochem. Parasitol. 53, 17-32, 1992
A:Title: Alternative splicing of the Schistosoma mansoni gene encoding a homologue of
A:Reference number: A45558; MUID:92365727; PMID:1501637
A:Accession: A45558
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-1717 <SHO>
A:Cross-references: EMBL:M86396; NID:g160957; PIDN:AAA29866.1; PID:g160958
A:Note: sequence extracted from NCBI backbone (NCBIP:111129)
C:Genetics:

A:Gene: SER
C:Superfamily: fluke epidermal growth factor receptor homolog 1; protein kinase homology
C:Keywords: alternative splicing; ATP; autophosphorylation; glycoprotein; phosphoprotein
F:1-19/Domain: signal sequence #status predicted <SIG>
F:20-1717/Product: epidermal growth factor receptor homolog 1 #status predicted <MAT>
F:1018-1323/Domain: protein kinase homology <KIN>
F:1026-1034/Region: protein kinase ATP-binding motif

Query Match 44.0%; Score 44; DB 1; Length 1717;
Best Local Similarity 61.5%; Pred. No. 1.2e+02;
Matches 8; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELKGKSTNTFCCKP 16
|| : |||||
Db 1311 ELMRTNTFCCKP 1323

RESULT 6
D71882
hypothetical protein jhp0825 - Helicobacter pylori (strain J99)
C:Species: Helicobacter pylori
A:Variety: strain J99
C:Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 29-Sep-1999
R:Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith, D.R.;
Ives, C.; Gibson, R.; Merberg, D.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; Vovis, G.F.;
Nature 387, 176-180, 1999
A:Title: Genomic sequence comparison of two unrelated isolates of the human gastric path
A:Reference number: A71800; MUID:99120557; PMID:9923682
A:Accession: D71882
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-100 <ARN>
A:Cross-references: GB:AE001512; GB:AE001439; NID:94155392; PIDN:AAD06402.1; PID:9415539
A:Experimental source: strain J99
C:Genetics:
A:Gene: jhp0825
C:Superfamily: conserved hypothetical protein HI0711

Query Match 43.0%; Score 43; DB 2; Length 100;
Best Local Similarity 58.3%; Pred. No. 14;
Matches 7; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 5 LGKSTNTFCCKP 16
|| : |||||
Db 82 LGSHSELCCKP 93

RESULT 7
A39035
ribonuclease-related anti-tumor protein - northern leopard frog (fragment)
C:Species: Rana pipiens (northern leopard frog)
C:Date: 31-Jul-1991 #sequence_revision 31-Jul-1991 #text_change 30-Jun-1993
C:Accession: A39035
R:Ardelt, W.; Mikulski, S.M.; Shogen, K.
J. Biol. Chem. 266, 245-251, 1991
A:Title: Amino acid sequence of an anti-tumor protein from Rana pipiens oocytes and earl
A:Reference number: A39035; MUID:91093131; PMID:1985896
A:Accession: A39035
A:Status: preliminary
A:Molecule type: protein
A:Residues: 1-104 <ARD>
C:Superfamily: pancreatic ribonuclease

Query Match 43.0%; Score 43; DB 2; Length 104;
Best Local Similarity 61.5%; Pred. No. 14;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
|| : |||||
Db 75 CKYKLGKSTNTFC 87

RESULT 8
S64904
probable membrane protein YLR072w - yeast (Saccharomyces cerevisiae)
N:Alternate names: hypothetical protein L2321
C:Species: Saccharomyces cerevisiae
C:Date: 01-Aug-1995 #sequence_revision 24-May-1996 #text_change 19-Apr-2002
C:Accession: S64904
R:Pohl, T.M.
submitted to the Protein Sequence Database, May 1996
A:Reference number: S64899
A:Accession: S64904
A:Molecule type: DNA
A:Residues: 1-693 <POH>
A:Cross-references: EMBL:Z73244; NID:gl360427; PID:e245792; PID:gl360428; GSPDB:GN00012;
A:Experimental source: strain S288C
C:Genetics:
A:Gene: MIPS:YLR072w
A:Cross-references: SGD:S0004062
A:Map position: 12R
C:Keywords: transmembrane protein
F:634-650/Domain: transmembrane #status predicted <TMN>

Query Match 43.0%; Score 43; DB 2; Length 693;
Best Local Similarity 50.0%; Pred. No. 75;
Matches 7; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFCCKP 15
|| : |||||
Db 358 SSSLGSSSTTYCKP 371

RESULT 9
T08852
Lustrin A - California red abalone
C:Species: Haliotis rufescens (California red abalone)
C:Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 21-Jul-2000
C:Accession: T08852
R:Shen, X.; Belcher, A.M.; Hansma, P.K.; Stucky, G.D.; Morse, D.E.
J. Biol. Chem. 272, 32472-32481, 1997
A:Title: Molecular cloning and characterization of lustrin A, a matrix protein from shel
A:Reference number: Z16496; MUID:98070424; PMID:9405458
A:Accession: T08852
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-1428 <SHE>
A:Cross-references: EMBL:AF023459; NID:g2723361; PIDN:AAB95154.1; PID:g2723362
A:Experimental source: tissue type mantle (shell and pearl nacre); cell type pallial
C:Superfamily: antileukoproteinase repeat homology
C:Keywords: extracellular matrix; extracellular protein
F:1382-1426/Domain: antileukoproteinase repeat homology <ALP>

Query Match 42.0%; Score 42; DB 2; Length 1428;
Best Local Similarity 43.8%; Pred. No. 2e+02;
Matches 7; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCCKP 16
|| : |||||
Db 1334 CRTNLQCPSTNYCKSP 1349

RESULT 10
B38346
ultra-high-sulfur keratin 2 - mouse
C:Species: Mus musculus (house mouse)
C:Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 24-Sep-1999
C:Accession: A38660; B38346
R:Wood, L.; Mills, M.; Hatzenbuehler, N.; Vogeli, G.
J. Biol. Chem. 266, 4024, 1991
A:Title: Serine-rich ultra high sulfur protein gene expression in murine hair and skin d
A:Reference number: A38660; MUID:91154184; PMID:1840598
A:Accession: A38660
A:Molecule type: DNA
A:Residues: 1-223 <WO2>

A;Cross-references: GB:M37760; NID:g200963; PIDN:AAA40107.1; PID:g200964
A;Note: this is a correction
R;Wood, L.; Mills, M.; Hatzenbuehler, N.; Vogeli, G.
J. Biol. Chem. 265, 21375-21380, 1990
A;Title: Serine-rich ultra high sulfur protein gene expression in murine hair and skin d
A;Reference number: A38346; MUID:91065960; PMID:2250030
A;Accession: B38346
A;Molecule type: DNA
A;Residues: 1-21, 'GCGCGGCGGCGGCGGSSCKPVC', 22-40, 'GSS', 44-45, 'G', 47-48, 'S', 50, 'GSS',
'WOO'
A;Cross-references: GB:M37759; NID:g200961; PIDN:AAA40106.1; PID:g200962
A;Note: the sequence reported in this paper has been corrected. See A38660
C;Superfamily: ultra-high-sulfur keratin

Query Match 41.0%; Score 41; DB 2; Length 223;
Best Local Similarity 41.2%; Pred. No. 57;
Matches 7; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCPPC 17
Db 10 CGSSCGGCGSSCKPVC 26

RESULT 11
A38346
ultra-high-sulfur keratin 1 - mouse
C;Species: Mus musculus (house mouse)
C;Date: 28-Jun-1991 #sequence_revision 28-Jun-1991 #text_change 24-Sep-1999
C;Accession: A38346
R;Wood, L.; Mills, M.; Hatzenbuehler, N.; Vogeli, G.
J. Biol. Chem. 265, 21375-21380, 1990
A;Title: Serine-rich ultra high sulfur protein gene expression in murine hair and skin d
A;Reference number: A38346; MUID:91065960; PMID:2250030
A;Accession: A38346
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-230 <WOO>
A;Cross-references: GB:M37759; NID:g200961; PIDN:AAA40106.1; PID:g200962
C;Superfamily: ultra-high-sulfur keratin

Query Match 41.0%; Score 41; DB 2; Length 230;
Best Local Similarity 41.2%; Pred. No. 59;
Matches 7; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCPPC 17
Db 31 CGSNCGGCGSSCKPVC 47

RESULT 12
A84947
lytB protein [imported] - Buchnera sp. (strain APS)
C;Species: Buchnera sp.
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 23-Mar-2001
C;Accession: A84947
R;Shigenobu, S.; Watanabe, H.; Hattori, M.; Sakaki, Y.; Ishikawa, H.
Nature 407, 81-86, 2000
A;Title: Genome sequence of the endocellular bacterial symbiont of aphids Buchnera sp. A
A;Reference number: A84930; MUID:20445173; PMID:10993077
A;Accession: A84947
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-319 <STO>
A;Cross-references: GB:AP000398; GSPDB:GN00144
A;Experimental source: strain APS
C;Genetics:
A;Gene: lytB; BU147
C;Superfamily: penicillin tolerance protein

Query Match 41.0%; Score 41; DB 2; Length 319;
Best Local Similarity 66.7%; Pred. No. 78;
Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 3 SELGKSTNTFC 14
Db 232 AELGKETGTFK 243

RESULT 13
B45511
chitinase (EC 3.2.1.14) precursor, basic - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cross)
C;Date: 03-Jun-1993 #sequence_revision 03-Jun-1993 #text_change 22-Jun-1999
C;Accession: B45511
R;Samac, D.A.; Hironaka, C.M.; Yallaly, P.E.; Shah, D.M.
Plant Physiol. 93, 907-914, 1990
A;Title: Isolation and characterization of the genes encoding basic and acidic chitinase
A;Reference number: A45511
A;Accession: B45511
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-335 <SAM>
A;Cross-references: GB:M38240; NID:g166665; PIDN:AAA32769.1; PID:g166666
C;Superfamily: lectin-related plant chitinase; hevein chitin-binding domain homology; p1
C;Keywords: glycosidase; hydrolase; polysaccharide degradation
F;34-76/Domain: hevein chitin-binding domain homology <HCB>
F;89-327/Domain: plant chitinase homology <PCH>

Query Match 41.0%; Score 41; DB 2; Length 335;
Best Local Similarity 50.0%; Pred. No. 81;
Matches 9; Conservative 1; Mismatches 6; Indels 2; Gaps 1;

QY 1 CASELGKSTNT--FCKPP 16
Db 50 CCSEFGWCGNTEPYCKQP 67

RESULT 14
AC1574
acetate kinase homolog AckA2 [imported] - Listeria innocua (strain Clip11262)
C;Species: Listeria innocua
C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 14-Dec-2001
C;Accession: AC1574
R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Bloeker
.; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussauguet, O.; Entian, K.D.; Fsihi, H
D.; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
A;Authors: Kreft, J.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland
ok, C.; Schluter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland
A;Title: Comparative genomics of Listeria species.
A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AC1574
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-397 <GLA>
A;Cross-references: GB:AL592022; PIDN:CAC96363.1; PID:g16413591; GSPDB:GN00178
A;Experimental source: strain Clip11262
C;Genetics:
A;Gene: AckA2
C;Superfamily: acetate kinase

Query Match 41.0%; Score 41; DB 2; Length 397;
Best Local Similarity 72.7%; Pred. No. 94;
Matches 8; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CASELGKSTNT 11
Db 214 CAIEAGKSVNT 224

RESULT 15
AH1220
acetate kinase homolog AckA2 [imported] - Listeria monocytogenes (strain EGD-e)
C;Species: Listeria monocytogenes
C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 14-Dec-2001
C;Accession: AH1220

R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Bloesker
.; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.; Fsihi, H.
D.; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
A;Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkut, G.; Madueno, E.; Maitournam, A.; Ma
ok, C.; Schluter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland,
A;Title: Comparative genomics of *Listeria* species.
A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AH1220
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-397 <GLA>
A;Cross-references: GB:NC_003210; PIDN:CAC99246.1; PID:gl6410584; GSPDB:GNO0177
A;Experimental source: strain EGD-e
C;Genetics:
A;Gene: AckA2
C;Superfamily: acetate kinase

Query Match 41.0%; Score 41; DB 2; Length 397;
Best Local Similarity 72.7%; Pred. No. 94;
Matches 8; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CASELGKSTNT 11
||| |||||
Db 214 CAIEAGKSVNT 224

Search completed: September 5, 2004, 10:01:18
Job time : 14.0505 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:38:39 ; Search time 7.72727 Seconds
(without alignments)
114.554 Million cell updates/sec

Title: US-09-761-636A-8

Perfect score: 100

Sequence: 1 CASELGKSTNTFCPPC 17

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	80	80.0	354	1	VEGD HUMAN
2	77	77.0	326	1	VEGD RAT
3	77	77.0	358	1	VEGD MOUSE
4	59	59.0	415	1	VEGC MOUSE
5	58	58.0	419	1	VEGC HUMAN
6	48	48.0	211	1	ADAR_BACSU
7	46	46.0	905	1	YDB3_HUMAN
8	46	46.0	1112	1	SENG_HUMAN
9	45	45.0	442	1	TIC1_MOUSE
10	43	43.0	104	1	RN30_RANPI
11	43	43.0	273	1	EX22_ARATH
12	43	43.0	279	1	EX36_ARATH
13	41	41.0	319	1	ISPH_BUCAI
14	41	41.0	322	1	CHIT_ARATH
15	41	41.0	397	1	ACK2_LISIN
16	41	41.0	397	1	ACK2_LISMO
17	41	41.0	439	1	TIC1_HUMAN
18	41	41.0	596	1	GLMN_MOUSE
19	41	41.0	642	1	UL77_HCMVA
20	41	41.0	685	1	CFAH_BOVIN
21	41	41.0	943	1	BLI4_CAEEL
22	41	41.0	988	1	PKC1_SCHPO
23	41	41.0	1174	1	KPC1_COCHO
24	41	41.0	1294	1	YOH5_YEAST
25	40.5	40.5	604	1	PGH2_CAVPO
26	40	40.0	224	1	LPRP_MYCTU
27	40	40.0	328	1	CHIT_PHAVU
28	40	40.0	353	1	ADA_SALTY
29	40	40.0	472	1	GATB_CAMJE
30	40	40.0	475	1	GATB_CHLTE
31	40	40.0	500	1	SUH_HUMAN
32	40	40.0	501	1	SUH_XENLA
33	40	40.0	515	1	SUHL_MOUSE

RESULT 1					
VEGD_HUMAN	40	40.0	516	1	SUHL_HUMAN
AC	O43915;				
DT	28-FEB-2003 (Rel. 41, Created)				
DT	28-FEB-2003 (Rel. 41, Last sequence update)				
DT	10-OCT-2003 (Rel. 42, Last annotation update)				
DE	Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF).				
DE	FIGF OR VEGFD.				
GN	Homo sapiens (Human).				
OS	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.				
OC	NCBI_TaxID=9606;				
OX	[1]				
RN	SEQUENCE FROM N.A.				
RP	TISSUE=Lung;				
RC	MEDLINE=97349118; PubMed=9205122;				
RX	Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;				
RA	"Molecular cloning of a novel vascular endothelial growth factor, VEGF-D.";				
RT	Genomics 42:483-488(1997).				
RL	[2]				
RN	SEQUENCE FROM N.A.				
RP	TISSUE=Lung;				
RC	MEDLINE=98140120; PubMed=9479493;				
RX	Rocchigiani M., Lestingi M., Iuddi A., Orlandini M., Franco B., Rossi E., Ballabio A., Zuffardi O., Oliviero S.;				
RA	"Human FIGF: cloning, gene structure, and mapping to chromosome Xp22.1 between the FIGA and the GRPR genes.";				
RT	Genomics 47:207-216(1998).				
RL	[3]				
RN	SEQUENCE FROM N.A.				
RP	MEDLINE=98118549; PubMed=9435229;				
RX	Achen M.G., Jeltsch M., Kukk E., Maekinen T., Vitali A., Wilks A.F., Alitalo K., Stacker S.A.;				
RA	"Vascular endothelial growth factor D (VEGF-D) is a ligand for the tyrosine kinases VEGF receptor 2 (Flk1) and VEGF receptor 3 (Flt4).";				
RT	Proc. Natl. Acad. Sci. U.S.A. 95:548-553(1998).				
RL	[4]				
RN	SEQUENCE FROM N.A.				
RP	TISSUE=Lung;				
RC	MEDLINE=22388257; PubMed=12477932;				
RX	Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Schuler G.D., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh P., Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,				

34	40	40.0	516	1	SUHL_HUMAN
35	40	40.0	526	1	SUH_MOUSE
36	40	40.0	554	1	SUH_CIOIN
37	40	40.0	594	1	SUH_DROME
38	40	40.0	833	1	CAFA_YERPE
39	39	39.0	85	1	IBB3_PHAVU
40	39	39.0	85	1	IBB4_PHAVU
41	39	39.0	139	1	ULC8_HCMVA
42	39	39.0	313	1	ISPH_BUCAP
43	39	39.0	322	1	CHI2_BRANA
44	39	39.0	354	1	ADA_ECOLI
45	39	39.0	451	1	YNV5_CAEEL

ALIGNMENTS


```

DR HSSP; P15692; LVPP.
DR InterPro; IPR004153; CXXC repeat.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXXC; 1.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
KW Cleavage on pair of basic residues; Multigene family.
FT SIGNAL 1 21
FT PROPEP 22 93
FT CHAIN 94 210
FT PROPEP 211 326
FT DOMAIN 227 317
FT REPEAT 227 242
FT REPEAT 263 278
FT REPEAT 282 298
FT REPEAT 306 317
FT DISULFID 116 158
FT DISULFID 147 194
FT DISULFID 151 196
FT DISULFID 141 141
FT DISULFID 150 150
FT CARBOHYD 160 160
FT CARBOHYD 190 190
FT CARBOHYD 292 292
SQ SEQUENCE 326 AA; 37112 MW; 1261AF373596C00 CRC64;

Query Match 77.0%; Score 77; DB 1; Length 326;
Best Local Similarity 87.5%; Pred. No. 1.7e-05;
Matches 14; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFKPPC 17
Db 126 ASELGKTNTFKPPC 141

RESULT 3
VEGD MOUSE
ID VEGD MOUSE STANDARD; PRT; 358 AA.
AC P97946;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced
DE growth factor) (FIGF).
GN FIGF OR VEGFD.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]_
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Fibroblast;
RX MEDLINE=97030254; PubMed=8876195;
RA Orlandini M., Marconini L., Ferruzzi R., Oliviero S.;
RT "Identification of a c-fos-induced gene that is related to the
RT platelet-derived growth factor/vascular endothelial growth factor
RT family.";
RL Proc. Natl. Acad. Sci. U.S.A. 93:11675-11680(1996).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Lung;
RX MEDLINE=97349118; PubMed=9205122;
RA Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
RT "Molecular cloning of a novel vascular endothelial growth factor,
RT VEGF-D.";
RL Genomics 42:483-488(1997).
RN [3]
RP DEVELOPMENTAL STAGE.

```

MEDLINE=98288130; PubMed=9622638;
Avantaggiato V., Orlandini M., Acampora D., Oliviero S., Simeone A.;
"Embryonic expression pattern of the murine figf gene, a growth factor
belonging to platelet-derived growth factor/vascular endothelial
growth factor family.";
Mech. Dev. 73:221-224(1998).
[4]
RECEPTOR SPECIFICITY.
RX MEDLINE=21276411; PubMed=11279005;
Baldwin M.E., Catmell B., Nice E.C., Roufail S., Hall N.E.,
Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;
"The specificity of receptor binding by vascular endothelial growth
factor-d is different in mouse and man.";
J. Biol. Chem. 276:19166-19171(2001).
CC -1- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis
and endothelial cell growth, stimulating their proliferation and
migration and also has effects on the permeability of blood
vessels. May function in the formation of the venous and lymphatic
vascular systems during embryogenesis, and also in the maintenance
of differentiated lymphatic endothelium in adults. Binds and
activates VEGFR-3 (Flt4) receptor.
CC -1- SUBUNIT: Homodimer; non-covalent and antiparallel.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- TISSUE SPECIFICITY: Highly expressed in fetal and adult lung.
CC -1- DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in several
body structures and organs of the embryo such as limb buds,
acoustic ganglion, teeth, heart, anterior pituitary as well as
lung and kidney mesenchyme, liver, derma, and periosteum of the
vertebral column.
CC -1- INDUCTION: By the transcription factor c-fos.
CC -1- PTM: Undergoes a complex proteolytic maturation which generates a
variety of processed secreted forms with increased activity toward
VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer
linked by disulfide bonds before secretion. The fully processed
VEGF-D is composed mostly of two VEGF homology domains (VHDs)
bound by non-covalent interactions (By similarity).
CC -1- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.

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EMBL; X99572; CAA67892.1; -;
EMBL; D89628; BAA14002.1; -;
HSSP; P15692; LVPP.
PMMA-2DPAGE; P97946; -;
MGI; MGI:108037; Figf.
GO; GO:0005576; C:extracellular; IDA.
GO; GO:0008083; F:growth factor activity; IDA.
GO; GO:0005515; F:protein binding; IPI.
GO; GO:0008283; P:cell proliferation; IDA.
InterPro; IPR004153; CXXC repeat.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF03128; CXXC; 2.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PD_growth_factor; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS0278; PDGF_2; 1.
KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
KW Cleavage on pair of basic residues; Multigene family.
FT SIGNAL 1 21
FT PROPEP 22 93
FT CHAIN 94 210
FT PROPEP 211 358
FT DOMAIN 227 323
FT REPEAT 227 242
FT REPEAT 263 278

VEGF-C first form an antiparallel homodimer linked by disulfide bonds. Before secretion, a cleavage occurs between arg-227 and ser-228 producing a heterotetramer. The next extracellular step of the processing removes the N-terminal propeptide. Finally the mature VEGF-C is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions (By similarity).

-1- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.

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CC

CC EMBL; U73620; AAC52984.1; -

CC EMBL; U58112; AAB46707.1; -

CC HSSP; P15692; 1VPP.

CC MGD; MGI:109124; Vegfc.

CC InterPro; IPR004153; CXXC repeat.

CC InterPro; IPR002400; GF_cysknot.

CC InterPro; IPR000072; PD_growth_factor.

CC Pfam; PF03128; CXXC; 5.

CC Pfam; PF00341; PDGF; 1.

CC PRINTS; PR00438; GPCYSKNOT.

CC ProDom; PD001629; PD_growth_factor; 1.

CC SMART; SM00341; PDGF; 1.

CC PROSITE; PS00249; PDGF_1; 1.

CC PROSITE; PS00278; PDGF_2; 1.

CC Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat; Cleavage on pair of basic residues; Multigene family.

CC SIGNAL 1 31

CC PROPEP 32 107

CC CHAIN 108 223

CC PROPEP 224 415

CC DOMAIN 276 358

CC REPEAT 276 291

CC REPEAT 300 315

CC REPEAT 324 339

CC REPEAT 343 358

CC DISULFID 127 169

CC DISULFID 158 205

CC DISULFID 162 207

CC DISULFID 152 152

CC DISULFID 161 161

CC CARBOHYD 171 171

CC CARBOHYD 201 201

CC CARBOHYD 236 236

CC SEQUENCE 415 AA; 46471 MW; D9D3DD3CECC659D6 CRC64;

Query Match 59.0%; Score 59; DB 1; Length 415;

Best Local Similarity 71.4%; Pred. No. 0.023; 3; Indels 0; Gaps 0;

Matches 10; Conservative 1; Mismatches 1;

QY 4 ELGKSTNTFFCKPPC 17

DB 139 EFGATNTFFRPPC 152

RESULT 5

VEGC_HUMAN STANDARD; PRT; 419 AA.

AC P49767;

DT 01-OCT-1996 (Rel. 34, Created)

DT 01-OCT-1996 (Rel. 34, Last annotation update)

DT 15-MAR-2004 (Rel. 43, Last annotation update)

DE Vascular endothelial growth factor C precursor (VEGF-C) (Vascular endothelial growth factor related protein) (VRP) (Flt4 ligand) (Flt4-L).

DE VEGFC.

OS Homo sapiens (Human).

CC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 CC NCBI_TaxID=9606;
 CC [1]
 CC SEQUENCE FROM N.A., AND SEQUENCE OF 103-120.
 CC MEDLINE=96178224; PubMed=8617204;
 CC Jaukov V., Pajusola K., Kaipainen A., Chilov D., Lahtinen I., Kukk E.,
 CC Saksa O., Kalkkinen N., Alitalo K.;
 CC "A novel vascular endothelial growth factor, VEGF-C, is a ligand for
 CC the Flt4 (VEGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases.";
 CC EMBO J. 15:230-238(1996).
 CC [2]
 CC ERROR.
 CC MEDLINE=96203094; PubMed=8612600;
 CC Jaukov V., Pajusola K., Kaipainen A., Chilov D., Lahtinen I., Kukk E.,
 CC Saksa O., Kalkkinen N., Alitalo K.;
 CC EMBO J. 15:1751-1751(1996).
 CC [3]
 CC SEQUENCE FROM N.A.
 CC TISSUE=Glial tumor;
 CC MEDLINE=96312526; PubMed=8700872;
 CC Lee J., Gray A., Yuan J., Luoh S.-M., Avraham H., Wood W.I.;
 CC "Vascular endothelial growth factor-related protein: a ligand and
 CC specific activator of the tyrosine kinase receptor Flt4.";
 CC Proc. Natl. Acad. Sci. U.S.A. 93:1988-1992(1996).
 CC [4]
 CC SEQUENCE FROM N.A.
 CC MEDLINE=97388482; PubMed=9247316;
 CC Fitz L.J., Morris J.C., Towler P., Long A., Burgess P., Greco R.,
 CC Wang J., Gassaway R., Nickbarg E., Kovacic S., Ciarella A.,
 CC Giannotti J., Finnerty H., Zollner R., Beier D.R., Leak L.V.,
 CC Turner K.J., Wood C.R.;
 CC "Characterization of murine Flt4 ligand/VEGF-C.";
 CC Oncogene 15:613-618(1997).
 CC [5]
 CC SEQUENCE FROM N.A.
 CC TISSUE=Skin;
 CC MEDLINE=97388257; PubMed=12477932;
 CC Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 CC Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 CC Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 CC Hopkins R.F., Jordan R., Moore T., Max S.I., Wang J., Haieh F.,
 CC Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 CC Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 CC Raha S.S., Loquellano N.A., Peters G.J., Carninci P., Prange C.,
 CC Bosak S.A., McEwan P.J., McKernan K.J., Abramson R.D., Mullany S.J.,
 CC Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 CC Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 CC Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
 CC Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 CC Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 CC Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 CC Butterfield Y.S., Krzywinski M.I., Skalska U., Smallos D.E.,
 CC Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
 CC "Generation and initial analysis of more than 15,000 full-length
 CC human and mouse cDNA sequences.";
 CC Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 CC [6]
 CC SEQUENCE OF 32-41; 112-121 AND 228-233, AND MUTAGENESIS OF ARG-227.
 CC MEDLINE=97377029; PubMed=9233800;
 CC Jaukov V., Sorsa T., Kumar V., Jeltsch M., Claesson-Welsh L., Cao Y.,
 CC Saksa O., Kalkkinen N., Alitalo K.;
 CC "Proteolytic processing regulates receptor specificity and activity of
 CC VEGF-C.";
 CC EMBO J. 16:3898-3911(1997).
 CC [7]
 CC FUNCTION: Growth factor active in angiogenesis, and endothelial
 CC cell growth, stimulating their proliferation and migration and
 CC also has effects on the permeability of blood vessels. May
 CC function in angiogenesis of the venous and lymphatic vascular
 CC systems during embryogenesis, and also in the maintenance of
 CC differentiated lymphatic endothelium in adults. Binds and
 CC activates VEGFR-2 (Flk1) and VEGFR-3 (Flt4) receptors.

CC -!- SUBUNIT: Homodimer; non-covalent and antiparallel.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- TISSUE SPECIFICITY: Spleen, lymph node, thymus, appendix, bone
 CC marrow, heart, placenta, ovary, skeletal muscle, prostate, testis,
 CC colon and small intestine and fetal liver, lung and kidney, but
 CC not in peripheral blood lymphocyte.
 CC -!- PMW: Undergoes a complex proteolytic maturation which generates a
 CC variety of processed secreted forms with increased activity toward
 CC VEGFR-3, but only the fully processed form could activate VEGFR-2.
 CC VEGF-C first form an antiparallel homodimer linked by disulfide
 CC bonds. Before secretion, a cleavage occurs between arg-227 and
 CC ser-228 producing a heterotetramer. The next extracellular step
 CC of the processing removes the N-terminal propeptide. Finally the
 CC mature VEGF-C is composed mostly of two VEGF homology domains
 CC (VHDS) bound by non-covalent interactions.
 CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
 CC -----
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 CC -----
 CC EMBL; X94216; CAA63907.1; -;
 CC EMBL; U43142; AAA85214.1; -;
 CC EMBL; U58111; AAB02909.1; -;
 CC EMBL; BC035212; AAH35212.1; -;
 CC PIR; S69207; S69207;
 CC HSSP; P15692; 1VPP;
 CC GeneW; HGNC:12682; VEGFC.
 CC MIM; 601528; -;
 CC GO; GO:0007515; P:lymph gland development; TAS.
 CC GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 CC GO; GO:0007165; P:signal transduction; TAS
 CC GO; GO:0006929; P:substrate-bound cell migration; TAS.
 CC InterPro; IPR004153; CXXC_repeat.
 CC InterPro; IPR002400; GF_cysknot.
 CC InterPro; IPR000072; PD_growth_factor.
 CC Pfam; PF03128; CXXC; 5.
 CC Pfam; PF00341; PDGF; 1.
 CC PRINTS; PR00438; GFCYSKNOT.
 CC ProDom; PD001629; PD_growth_factor; 1.
 CC SMART; SM00441; PDGF; 1.
 CC PROSITE; PS00249; PDGF_1; 1.
 CC PROSITE; PS02078; PDGF_2; 1.
 CC Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
 CC Cleavage on pair of basic residues; Multigene family.
 CC SIGNAL 1 31
 CC PROPEP 32 111 OR 102.
 CC CHAIN 112 227 VASCULAR ENDOTHELIAL GROWTH FACTOR C.
 CC PROPEP 228 419
 CC DOMAIN 280 362 4 X 16 AA REPEATS OF C-X(10)-C-X-C-
 CC X(1,3)-C.
 CC REPEAT 280 295 1.
 CC REPEAT 304 319 2.
 CC REPEAT 328 343 3.
 CC REPEAT 347 362 4.
 CC BY SIMILARITY.
 CC BY SIMILARITY.
 CC BY SIMILARITY.
 CC INTERCHAIN (BY SIMILARITY).
 CC INTERCHAIN (BY SIMILARITY).
 CC N-LINKED (GLCNAC. . .) (POTENTIAL).
 CC N-LINKED (GLCNAC. . .) (POTENTIAL).
 CC CARBOHYD 175 175 N-LINKED (GLCNAC. . .) (POTENTIAL).
 CC CARBOHYD 205 205 N-LINKED (GLCNAC. . .) (POTENTIAL).
 CC CARBOHYD 240 240 N-LINKED (GLCNAC. . .) (POTENTIAL).
 CC MUTAGEN 227 227 R-S: NO PROTEOLYTIC PROCESSING AND LOWER
 CC EFFECT ON VEGFR-2 AND VEGFR-3.
 CC SQ SEQUENCE 419 AA; 46883 MW; 9F598719DB3E014F CRC64;
 CC Query Match 58.0%; Score 58; DB 1; Length 419;
 CC Best Local Similarity 71.4%; Pred. No. 0.034;

Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 4 ELGKSTNTFFCKPPC 17
| | | | |
Db 143 EFGVATNTFFCKPPC 156

RESULT 6

ADAA_BACSU STANDARD; PRT; 211 AA.
AC P19219;
DT 01-NOV-1990 (Rel. 16, Created)
DT 01-NOV-1990 (Rel. 16, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Methylphosphotriester-DNA alkyltransferase.
GN ADAA OR BSU01810.
OS Bacillus subtilis.
OC Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
OX NCBI_TaxID=1423;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=168;
RX MEDLINE=91016931; PubMed=2120677;
RA Morohoshi F., Hayashi K., Munakata N.;
RT "Bacillus subtilis ada operon encodes two DNA alkyltransferases.";
RL Nucleic Acids Res. 18:5473-5480(1990).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=168;
RX MEDLINE=98044033; PubMed=9384377;
RA Kunst F., Ogasawara N., Moszer I., Albertini A.M., Alloni G.,
RA Azevedo V., Bertero M.G., Bessieres P., Bolotin A., Borchert S.,
RA Borriess R., Boursier L., Brans A., Braun M., Brignell S.C., Bron S.,
RA Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M.,
RA Chou S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A.,
RA Denizot F., Devine K.M., Dusterhoft A., Ehrlich S.D., Emmerson P.T.,
RA Entian K.D., Errington J., Fabret C., Ferrari E., Foulger D.,
RA Fritz C., Fujita M., Fujita Y., Fuma S., Gaizzi A., Galleron N.,
RA Ghm S.Y., Glaser P., Goffeau A., Goughly E.J., Grandi G.,
RA Giuseppe G., Guy B.J., Haga K., Halech J., Harwood C.R., Henaut A.,
RA Hilbert H., Holsappel S., Hosono S., Hullo M.F., Itaya M., Jones L.,
RA Joris B., Karamata D., Kasahara Y., Klueter-Blanchard M., Klein C.,
RA Kobayashi Y., Koetter P., Koningsstein G., Krogh S., Kumano M.,
RA Kurita K., Lapidus A., Lardinois S., Lauber J., Lazarevic V.,
RA Lee S.M., Levine A., Liu H., Masuda S., Mauel C., Medigue C.,
RA Medina N., Mellado R.P., Mizuno K., Moesti D., Nakai S., Noback M.,
RA Noone D., O'Reilly M., Ogawa K., Ogiwara A., Oudega B., Park S.H.,
RA Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M.,
RA Presecan E., Pujic P., Purnelle B., Rapoport G., Rey M., Reynolds S.,
RA Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,
RA Sato T., Scanlan E., Schleich S., Schroeter K., Scoffone F.,
RA Sekiguchi J., Sekowska A., Seror S.J., Serro P., Shin B.S., Soldo B.,
RA Sorokin A., Taccioni E., Takagi T., Takahashi H., Takemaru K.,
RA Takeuchi M., Tamakoshi A., Tanaka T., Terpstra P., Tognoni A.,
RA Tosato V., Uchiyama S., Vandenbol M., Vannier F., Vassarotti A.,
RA Viari A., Wambutt R., Wedler E., Wedler H., Weitzenecker T.,
RA Winters P., Wipat A., Yamamoto H., Yamane K., Yasumoto K., Yata K.,
RA Yoshida K., Yoshikawa H.P., Zumbstein E., Yoshikawa H., Danchin A.;
RT "The complete genome sequence of the Gram-positive bacterium Bacillus subtilis."
RL Nature 390:249-256(1997).
RN [4]
RP MCTAGENESIS.
RX MEDLINE=92078089; PubMed=1744039;
RA Morohoshi F., Hayashi K., Munakata N.;
RT "Molecular analysis of Bacillus subtilis ada mutants deficient in the

adaptive response to simple alkylating agents.";
J. Bacteriol. 173:7834-7840(1991).
-!- FUNCTION: METHYLPHOSPHOTRIESTER-DNA ALKYLTRANSFERASE IS ONE OF
CC TWO GENES REQUIRED FOR THE ADAPTIVE RESPONSE OF BACTERIA TO
CC ALKYLATING AGENTS. IT ACCEPTS A METHYL GROUP FROM METHYLPHOSPHO-
CC TRIESTERS AND THEN ACTS AS A TRANSCRIPTIONAL ACTIVATOR OF THE
CC ADA OPERON.
CC
CC -!- COPACTOR: One zinc ion per subunit (By similarity).
CC -!- SIMILARITY: TO THE N-TERMINAL REGION OF E. COLI ADA PROTEIN AND
CC THE C-TERMINAL REGION OF THE ARAC/XYLS FAMILY.
CC
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CC or send an email to license@isb-sib.ch).
CC
CC EMBL; X53399; CAA37475.1; --
CC EMBL; AB006424; BAA33074.1; --
CC EMBL; Z99104; CAB11957.1; --
CC PIR; S11483; XUBSMM.
CC HSSP; P06134; IADN.
CC Subtilist; BG10166; adaA.
CC InterPro; IPR004026; Ada_Zn_bind.
CC InterPro; IPR000005; HTHArac
CC Pfam; PF02805; Ada_Zn_binding; 1.
CC Pfam; PF00165; HTH_Arac; 2.
CC PRINTS; PR00032; HTHARAC.
CC SMART; SM00342; HTH_ARAC; 1.
CC PROSITE; PS00041; HTH_ARAC_FAMILY_1; 1.
CC PROSITE; PS01124; HTH_ARAC_FAMILY_2; 1.
KW DNA repair; transcription regulation; Transferase; Methyltransferase;
KW Activator; DNA-binding; Metal-binding; Zinc; Complete proteome.
FT METAL 54 54
FT METAL 58 58
FT METAL 85 85
FT METAL 88 88
FT METAL 118 137
FT ACT_SITE 85 85
FT MUTAGEN 86 87
SQ SEQUENCE 211 AA; 24299 MW; 920931082527EC27 CRC64;
Query Match 48.0%; Score 48; DB 1; Length 211;
Best Local Similarity 72.7%; Pred No. 0.82;
Matches 8; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
Qy 7 KSTNTFFCKPPC 17
| | | | |
Db 48 KSTGIFCKPSC 58
| | | | |
RESULT 7
YD83 HUMAN STANDARD; PRT; 905 AA.
AC Q9P264;
DT 16-OCT-2001 (Rel. 40, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Hypothetical protein KIAA1383.
GN KIAA1383.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=20181126; PubMed=10718198;
RA Nagase T., Kikuno R., Ishikawa K.-I., Hirose M., Ohara O.;
RT "Prediction of the coding sequences of unidentified human genes. XVI.
The complete sequences of 150 new cDNA clones from brain which code

```

RT for large proteins in vitro.";
RL DNA Res. 7:65-73(2000).
RN [2]
RP SEQUENCE FROM N.A.
RA Coville G.;
RL Submitted (MAR-2001) to the EMBL/GenBank/DBJ databases.
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=22388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Joqueillano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Villallon D.K., Muzny K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzyzinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RA "Generation and initial analysis of more than 15,000 full-length
RT human and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [4]
RP SEQUENCE FROM N.A. (ISOFORM 2).
RC TISSUE=Testis;
RX MEDLINE=22388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Joqueillano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Villallon D.K., Muzny K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzyzinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RA "Generation and initial analysis of more than 15,000 full-length
RT human and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [5]
RP SEQUENCE OF 1-692 FROM N.A. (ISOFORM 2).
RC TISSUE=Tongue;
RA Tashiro H., Yamazaki M., Watanabe K., Kumagai A., Itakura S.,
RA Fukuzumi Y., Fujimori Y., Komiyama M., Sugiyama T., Irie R.,
RA Otsuki T., Sato H., Wakamatsu A., Ishii S., Yamamoto J., Isono Y.,
RA Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamashita H.,
RA Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Kanda K., Wagatsuma M.,
RA Murakawa K., Kanehori K., Takahashi-Fujii A., Oshima A., Sugiyama A.,
RA Kawakami B., Suzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K.,
RA Isogai T.;
RT "NEDO human cDNA sequencing project.";
RL Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
RN [6]
RP SEQUENCE FROM N.A. (ISOFORM 1), AND VARIANT CYS-1106.
RC TISSUE=Brain;
RA Ohara O., Suyama M., Nagase T., Ishikawa K., Kikuno R.;
RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
RN [7]
RP SEQUENCE OF 29-1112 FROM N.A. (ISOFORM 1), AND VARIANT CYS-1106.
RC TISSUE=Brain;
RX MEDLINE=99087487; PubMed=9872452;
RA Nagase T., Ishikawa K.-I., Suyama M., Kikuno R., Miyajima N.,
RA Tanaka A., Kotani H., Nomura N., Ohara O.;
RT "Prediction of the coding sequences of unidentified human genes. XI.
RT The complete sequences of 100 new cDNA clones from brain which code
RL for large proteins in vitro.";
RL DNA Res. 5:277-286(1998).
CC -!- FUNCTION: Protease that releases SUMO-1 from its precursor
CC sequence.
CC -!- SUBCELLULAR LOCATION: Cytoplasmic.
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=1;

```


DT	28-FEB-2003 (Rel. 41, Last annotation update)
DE	Putative alpha-expansin 26 precursor (At-EXP26) (AtEx26) (Ath-
DE	ExpAlpha-1.16).
GN	EXP26 OR AT5G39290 OR K3K3.20 OR K3K3_140.
OS	Arabidopsis thaliana (Mouse-ear cress).
OC	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC	Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC	eurosid II; Brassicales; Brassicaceae; Arabidopsis.
OX	NCBI_TaxID=3702;
RN	[1]
RP	SEQUENCE FROM N.A.
RC	STRAIN=cv. Columbia;
EX	MEDLINE=98344145; PubMed=9679202;
RA	Kaneko T., Kotani H., Nakamura Y., Sato S., Asamizu E., Miyajima N.,
RA	Tabata S.;
RT	"Structural analysis of Arabidopsis thaliana chromosome 5. V. Sequence
RT	features of the regions of 1,381,565 bp covered by twenty one
RT	physically assigned P1 and TAC clones.";
RL	DNA Res. 5:131-145(1998).
CC	[2]
CC	CONCEPTUAL TRANSLATION.
EN	Cosgrove D.J.;
RA	Unpublished observations (DEC-2001).
CC	-!- FUNCTION: Causes loosening and extension of plant cell walls by
CC	disrupting noncovalent bonding between cellulose microfibrils and
CC	matrix glucans. No enzymatic activity has been found (By
CC	similarity).
CC	-!- SUBCELLULAR LOCATION: Cell-wall bound.
CC	-!- SIMILARITY: Belongs to the expansin family.
CC	-!- SIMILARITY: Contains 1 expansin-like EG45 domain.
CC	-!- SIMILARITY: Contains 1 expansin-like CBD domain.
CC	-!- CAUTION: Ref.1 sequence differs from that shown due to erroneous
CC	gene model prediction.
CC	-!- DATABASE: NAME=EXPANSIN homepage;
CC	WWW="http://www.bio.psu.edu/expansins/".
CC	-----
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CC	or send an email to license@isb-sib.ch).
CC	-----
DR	EMBL; AB010694; BAB09384.1; --
DR	InterPro; IPR007112; Expan_endogl.
DR	InterPro; IPR007118; Expan_Lol.pl.
DR	InterPro; IPR007117; Expan_Lol.pl.C.
DR	Pfam; PF01357; Pollen.allergen; 1.
DR	PRINTS; PR01225; EXPANSNFAMLY.
DR	PRODOM; PD002179; Expan_Lol.pl.C; 1.
DR	PROSITE; PS50843; EXPANSIN CBD; 1.
DR	PROSITE; PS50842; EXPANSIN EG45; 1.
KW	Hypothetical protein; Cell wall; Signal; Multigene family.
FT	SIGNAL 1 27 POTENTIAL.
FT	CHAIN 28 279 PUTATIVE ALPHA-EXPANSIN 26.
FT	DOMAIN 76 186 EXPANSIN-LIKE EG45.
FT	DOMAIN 196 275 EXPANSIN-LIKE CBD.
SQ	SEQUENCE 279 AA; 30980 MW; 5053E7CB497E47C4 CRC64;
Query Match	43.0%; Score 43; DB 1; Length 279;
Best Local Similarity	37.5%; Pred. No. 7.5;
Matches	6; Conservative 4; Mismatches 6; Indels 0; Gaps 0;
QY	1 CASELGKSTNTCKPP 16
Db	135 CFANYSKTTDLWCNPP 150
RESULT 13	
ISPH_BUCAI	
ID	ISPH_BUCAI STANDARD; PRT; 319 AA.
AC	P57247;
DT	16-OCT-2001 (Rel. 40, Created)
DT	16-OCT-2001 (Rel. 40, Last sequence update)
DT	10-OCT-2003 (Rel. 42, Last annotation update)
DE	4-hydroxy-3-methylbut-2-en-1-yl diphosphate reductase (EC 1.17.1.2).
GN	ISPH OR LYTB OR BUI47.
OS	Buchnera aphidicola (subsp. Acyrthosiphon pisum) (Acyrthosiphon pisum
OS	symbiotic bacterium).
OC	Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC	Enterobacteriaceae; Buchnera.
OX	NCBI_TaxID=118099;
RN	[1]
RP	SEQUENCE FROM N.A.
RC	STRAIN=Tokyo 1998;
EX	MEDLINE=20445173; PubMed=10993077;
RA	Shigenobu S., Watanabe H., Hattori M., Sakaki Y., Ishikawa H.;
RT	"Genome sequence of the endocellular bacterial symbiont of aphids
RT	Buchnera sp. APS.";
RL	Nature 407:81-86(2000).
CC	-!- FUNCTION: Converts 1-hydroxy-2-methyl-2-(E)-butenyl 4-diphosphate
CC	into isopentenyl diphosphate (IPP) and dimethylallyl diphosphate
CC	(DMAPP) (By similarity).
CC	-!- CATALYTIC ACTIVITY: Isopentenyl diphosphate + NAD(P)(+) + H(2)O =
CC	(E)-4-hydroxy-3-methylbut-2-en-1-yl diphosphate + NAD(P)H.
CC	-!- PATHWAY: Nonmevalonate terpenoid biosynthesis pathway; seventh
CC	(last) step.
CC	-!- SIMILARITY: Belongs to the isph family.
CC	-----
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CC	or send an email to license@isb-sib.ch).
CC	-----
DR	EMBL; AP001118; BAB12865.1; --
DR	HAMAP; MF_00191; --; 1.
DR	InterPro; IPR003451; LytCB.
DR	Pfam; PF02401; LYTB; 1.
DR	TIGRFAMS; TIGR00216; isph_lytCB; 1.
KW	Isoprene biosynthesis; Complete proteome; Oxidoreductase; NADP.
SQ	SEQUENCE 319 AA; 35741 MW; 69D8AFCC12DD09B8 CRC64;
Query Match	41.0%; Score 41; DB 1; Length 319;
Best Local Similarity	66.7%; Pred. No. 18;
Matches	8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
QY	3 SELGKSTNTFCCK 14
Db	232 AELGKETGTFTK 243
RESULT 14	
CHIT_ARATH	
ID	CHIT_ARATH STANDARD; PRT; 322 AA.
AC	P19171;
DT	01-NOV-1990 (Rel. 16, Created)
DT	01-FEB-1991 (Rel. 17, Last sequence update)
DT	15-MAR-2004 (Rel. 43, Last annotation update)
DE	Basic endochitinase precursor (EC 3.2.1.14).
GN	AT3G12500 OR T2E22.18 OR T2E22.119 OR MQC3.32 OR MQC3.34.
OS	Arabidopsis thaliana (Mouse-ear cress).
OC	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC	Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC	eurosid II; Brassicales; Brassicaceae; Arabidopsis.
OX	NCBI_TaxID=3702;
RN	[1]
RP	SEQUENCE FROM N.A.
RC	STRAIN=cv. Columbia;
RA	Samac D.A., Hironaka C.M., Yallaly P.E., Shah D.M.;
RT	"Isolation and characterization of the genes encoding basic and
RT	acidic chitinase in Arabidopsis thaliana.";
RL	Plant Physiol. 93:907-914(1990).

```

[2]
RN SEQUENCE FROM N.A.
RC STRAIN=cv. Columbia;
RA MEDLINE=20363099; PubMed=10907853;
RA Kaneko T., Katoh T., Sato S., Nakamura A., Asamizu E., Tabata S.;
RT "Structural analysis of Arabidopsis thaliana chromosome 3. II.
RT Sequence features of the 4,251,695 bp regions covered by 90 P1, TAC
RT and BAC clones.";
RL DNA Res. 7:217-221(2000).
CC -!- FUNCTION: This protein functions as a defense against chitin
CC containing fungal pathogens.
CC -!- CATALYTIC ACTIVITY: Hydrolysis of the 1,4-beta-linkages of N-
CC acetyl-D-glucosamine polymers of chitin.
CC -!- SUBCELLULAR LOCATION: Vacuolar and protoplast.
CC -!- TISSUE SPECIFICITY: High constitutive level in roots with lower
CC levels in leaves and flowering shoots.
CC -!- INDUCTION: Ethylene induces high levels of systemic expression
CC of basic chitinase with expression increasing with plant age.
CC -!- SIMILARITY: Belongs to chitinase class IA (family 19 of glycosyl
CC hydrolases).
CC -!- SIMILARITY: Contains 1 chitin-binding type-1 domain.
CC
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CC
CC EMBL; M38240; AAA32769.1; ALT INIT.
CC EMBL; AP002047; BAB03157.1; -.
CC HSP; P23951; 2BA.
CC InterPro: IPR001002; Chitin binding 1.
CC InterPro: IPR000726; Glyco_hydro_19.
CC Pfam; PF00187; Chitin_bind_1; 1.
CC Pfam; PF00182; Glyco_hydro_19; 1.
CC PRINTS; PR00451; CHITINBINDING.
CC ProDom; PD000609; Chitin binding 1; 1.
CC ProDom; PD354900; Glyco_hydro_19; 1.
CC SMART; SM00270; Chitin_1.
CC PROSITE; PS50941; CHIT_BIND_I_2; 1.
CC PROSITE; PS00026; CHIT_BIND_I_1; 1.
CC PROSITE; PS00773; CHITINASE_19_1; 1.
CC PROSITE; PS00774; CHITINASE_19_2; 1.
CC KX Hydrolase; Glycosidase; Chitin degradation; Chitin-binding; Signal.
CC FT SIGNAL 1 20
CC CHAIN 21 315 BASIC ENDOCHITININASE.
CC FT PROPEP 316 322 REMOVED IN MATURE FORM (PROBABLE).
CC FT DOMAIN 21 62 CHITIN-BINDING TYPE-1.
CC FT DISULFID 23 38 BY SIMILARITY.
CC FT DISULFID 32 44 BY SIMILARITY.
CC FT DISULFID 37 51 BY SIMILARITY.
CC FT DISULFID 56 60 BY SIMILARITY.
CC FT DISULFID 94 156 BY SIMILARITY.
CC FT DISULFID 168 176 BY SIMILARITY.
CC FT DISULFID 275 307 BY SIMILARITY.
CC SQ SEQUENCE 322 AA; 34609 MW; C9AFPE4C544FCCD7 CRC64;

Query Match 41.0%; Score 41; DB 1; Length 322;
Best Local Similarity 50.0%; Pred. No. 19;
Matches 9; Conservative 1; Mismatches 6; Indels 2; Gaps 1;

QY 1 CASELGKSTNT--FCKPP 16
Db 37 CCSEFGWCGNTEPYCKQP 54

RESULT 15
ACK2 LISIN
ID _ACK2 LISIN STANDARD; PRT; 397 AA.
AC Q92CN9;
DT 28-FEB-2003 (Rel. 41, Created)

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DT SEQUENCE FROM N.A.
DT STRAIN=20363099; PubMed=10907853;
DE MEDLINE=20363099; PubMed=10907853;
DE Acetate kinase 2 (EC 2.7.2.1) (Acetokinase 2).
GN ACK2 OR LIN1132.
OS Listeria innocua.
OC Bacteria; Firmicutes; Bacillales; Listeriaceae; Listeria.
CX NCBI_TaxID=1642;
RN [1]
RP SEQUENCE FROM N.A.
RP STRAIN=CLIP 11262 / Serovar 6a;
RX MEDLINE=21537279; PubMed=11679669;
RA Glaser P., Franche L., Bloecher H., Brandt P., Chakraborty T.,
RA Baquero F., Berche P., Bloecher H., de Daruvar A., Dehoux P.,
RA Charbit A., Cherouani F., Couve E., de Daruvar A., Dehoux P.,
RA Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,
RA Entian K.-D., Faihi H., Garcia-del Portillo F., Garrido P.,
RA Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
RA Jones L.-M., Kaerst U., Kref J., Kuhn M., Kunst F., Kurapkat G.,
RA Madueno E., Maitournam A., Mara Vicente J., Ng E., Nedjari H.,
RA Nordsiek G., Novella S., de Pablo B., Perez-Diaz J.-C., Purcell R.,
RA Remmel B., Rose M., Schlueter T., Simoes N., Tietz A.,
RA Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
RL Science 294:849-852(2001).
CC -!- CATALYTIC ACTIVITY: ATP + acetate = ADP + acetyl phosphate.
CC -!- PATHWAY: Conversion of acetate to acetyl-CoA; first step.
CC -!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
CC -!- SIMILARITY: Belongs to the acetokinase family.
CC
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CC
CC EMBL; AL596167; CAC96363.1; -.
CC PIR; AC1574; AC1574.
CC Listalist; LIN01132; -.
CC HAMAP; MF 00020; -.
CC InterPro; IPR000890; Acetate_kin.
CC InterPro; IPR004372; ACKA.
CC Pfam; PF00871; Acetate_kinase; 1.
CC PRINTS; PR00471; ACETATEKINASE.
CC TIGRFAMs; TIGR00016; ackA; 1.
CC PROSITE; PS01075; ACETATE_KINASE_1; 1.
CC PROSITE; PS01075; ACETATE_KINASE_2; 1.
CC KW Transferase; Kinase; Complete proteome.
CC SQ SEQUENCE 397 AA; 43115 MW; 5822544EF92CBF51 CRC64;

Query Match 41.0%; Score 41; DB 1; Length 397;
Best Local Similarity 72.7%; Pred. No. 23;
Matches 8; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CASELGKSTNT 11
Db 214 CAIEAGKSVNT 224

Search completed: September 5, 2004, 09:56:05
Job time : 8.72727 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:46:09 ; Search time 38.4646 Seconds
(without alignments)
139.448 Million cell updates/sec

Title: US-09-761-636A-8
Perfect score: 100
Sequence: 1 CASELGKSTNTFTCKPPC 17

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

SPREMBL 25:*

1: sp_archaea:*

2: sp_bacteria:*

3: sp_fungi:*

4: sp_human:*

5: sp_invertebrate:*

6: sp_mammal:*

7: sp_mhc:*

8: sp_organelle:*

9: sp_phase:*

10: sp_plant:*

11: sp_rodent:*

12: sp_virus:*

13: sp_vertebrate:*

14: sp_unclassified:*

15: sp_rvirus:*

16: sp_bacteriap:*

17: sp_archaeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description
1	77	77.0	326	11	Q91ZE4
2	61	61.0	252	13	Q8QGD7
3	59	59.0	326	11	Q91ZH6
4	59	59.0	415	11	Q91ZH3
5	59	59.0	418	13	O57352
6	59	59.0	420	6	Q9XS50
7	51.5	51.5	396	13	Q7T3I6
8	50	50.0	888	11	Q8CUD6
9	50	50.0	891	11	Q8BJS7
10	49	49.0	127	13	Q91TV8
11	48.5	48.5	746	10	Q91TV8
12	48.5	48.5	746	10	Q91TV8
13	48.5	48.5	330	5	O18118
14	46	46.0	198	16	Q8LWU7
15	46	46.0	326	8	Q8MD06
16	46	46.0	605	16	Q81JJ8

17	46	46.0	605	16	Q81410
18	45	45.0	86	17	Q8ZTL2
19	45	45.0	198	16	Q81A51
20	45	45.0	364	11	Q8BM07
21	45	45.0	367	10	Q9C6R6
22	45	45.0	367	11	Q8BM19
23	45	45.0	371	10	Q8C6F7
24	45	45.0	439	11	Q8BKQ3
25	44.5	44.5	621	5	Q7YH2
26	44.5	44.5	1036	5	Q8IBS4
27	44	44.0	145	5	Q9VE57
28	44	44.0	193	5	Q8TA40
29	44	44.0	461	16	Q8DA41
30	44	44.0	471	10	Q9FHK1
31	44	44.0	677	10	Q9FLD9
32	44	44.0	1189	5	Q9W378
33	44	44.0	1189	5	Q9Y111
34	44	44.0	1717	5	Q26566
35	43	43.0	100	16	Q92KW0
36	43	43.0	127	13	Q8UVX5
37	43	43.0	603	16	Q8ReT0
38	43	43.0	693	3	Q08001
39	43	43.0	849	4	Q96SQ3
40	43	43.0	997	5	Q967Z1
41	42	42.0	175	10	Q9LKW0
42	42	42.0	288	5	Q9XYV5
43	42	42.0	326	10	P93680
44	42	42.0	1011	3	Q9P944
45	42	42.0	1428	5	O44341

ALIGNMENTS

RESULT 1

Q91ZE4 ID Q91ZE4 PRELIMINARY; PRT; 326 AA.
AC Q91ZE4;
DT 01-DEC-2001 (TREMBLrel. 19, Created)
DT 01-DEC-2001 (TREMBLrel. 19, Last sequence update)
DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE VEGF-D.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Sprague-Dawley;
RA Kirkin V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J.,
RA Pepper M.S., Gianni A., Sleeman J.P.;
RT "Characterization of indolinones which specifically inhibit VEGF-C-and
RT VEGF-D-induced activation of VEGFR-3 but not VEGFR-2.";
RL Eur. J. Biochem. 0:0-0(2001).
DR EMBL; AY032728; AAK96008.1; -;
DR GO; GO:0016020; C-membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR004153; CXXC repeat.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXXC; 1.
DR Pfam; PF00341; PDGF; 1.
DR Prodom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 326 AA; 37106 MW; D7CAEBA6C9FABB7D CRC64;

Query Match 77.0%; Score 77; DB 11; Length 326;
Best Local Similarity 87.5%; Pred. No. 1.9e-05;
Matches 14; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFTCKPPC 17

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Db 126 ASELGKSTNTFFCKPPC 141
|||||:|||||
RESULT 2
Q8QGD7 PRELIMINARY; PRT; 252 AA.
AC Q8QGD7;
DR PF03128; CXXC; 5.
DR PF03341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR PRODOM; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS02078; PDGF_2; 1.
FT NON TER 1
SQ SEQUENCE 326 AA; 36826 MW; DOB2772C77836914 CRC64;

Query Match 59.0%; Score 59; DB 11; Length 326;
Best Local Similarity 71.4%; Pred. No. 0.033;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 4 ELGKSTNTFFCKPPC 17
| : | | | | |
Db 50 EFGAATNTFFKPPC 63
| : | | | | |

RESULT 4
Q91ZE3 PRELIMINARY; PRT; 415 AA.
AC Q91ZE3;
DR 01-DEC-2001 (TREMBLrel. 19, Created)
DT 01-DEC-2001 (TREMBLrel. 19, Last sequence update)
DR 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE VEGF-C.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-Sprague-Dawley;
RA Kirkin V., Mazitechek R., Krishnan J., Steffen A., Waltenberger J.,
RT Pepper M.S., Gianni A., Sleeman J.P.;
RT "Characterization of indolones which specifically inhibit VEGF-C-and
RT VEGF-D-induced activation of VEGFR-3 but not VEGFR-2.";
RL Eur. J. Biochem. 0:0-0(2001).
DR EMBL; AY032729; AAK96009.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR004153; CXXC repeat.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXXC; 5.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR PRODOM; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS02078; PDGF_2; 1.
SQ SEQUENCE 415 AA; 46397 MW; 1EB677F5B260A525 CRC64;

Query Match 59.0%; Score 59; DB 11; Length 415;
Best Local Similarity 71.4%; Pred. No. 0.042;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 4 ELGKSTNTFFCKPPC 17
| : | | | | |
Db 139 EFGAATNTFFKPPC 152
| : | | | | |

RESULT 5
Q57352 PRELIMINARY; PRT; 418 AA.
AC Q57352;
DR 01-JUN-1998 (TREMBLrel. 06, Created)
DT 01-JUN-1998 (TREMBLrel. 06, Last sequence update)
DR 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor C precursor.
GN VEGF-C.

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Db 126 ASELGKSTNTFFCKPPC 141
|||||:|||||
RESULT 2
Q8QGD7 PRELIMINARY; PRT; 252 AA.
AC Q8QGD7;
DR PF03128; CXXC; 5.
DR PF03341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR PRODOM; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS02078; PDGF_2; 1.
FT NON TER 1
SQ SEQUENCE 326 AA; 36826 MW; DOB2772C77836914 CRC64;

Query Match 61.0%; Score 61; DB 13; Length 252;
Best Local Similarity 68.8%; Pred. No. 0.011;
Matches 11; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

Qy 2 ASELGKSTNTFFCKPPC 17
| : | | | | |
Db 151 AKELGTTNTFFKPPC 136
| : | | | | |

RESULT 3
Q91ZH6 PRELIMINARY; PRT; 326 AA.
AC Q91ZH6;
DR 01-DEC-2001 (TREMBLrel. 19, Created)
DT 01-DEC-2001 (TREMBLrel. 19, Last sequence update)
DR 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor C (fragment).
GN VEGFC.
OS Meriones unguiculatus (Mongolian jird) (Mongolian gerbil).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Gerbillinae;
OC Meriones.
OX NCBI_TaxID=10047;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Lung;
RA Panlailaitis B.J., Fuhrman J.A.;
RT "Brugia malayi stimulates VEGF-C, a growth factor specific for
RT lymphatic endothelium, by an indirect mechanism.";
RL Submitted (OCT-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF432867; AAL28127.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR004153; CXXC repeat.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.

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OS Coturnix coturnix (Common quail).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Coturnix.
OX NCBI_TaxID=9091;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=98167900; PubMed=9435294;
RA Eichmann A., Corbel C., Jaffredo T., Breant V., Joukov V., Kumar V.,
RA Alitalo K., Le Douarin N.M.;
RT "Avian VEGF-C: cloning, embryonic expression pattern and stimulation
RT of the differentiation of VEGFR2 expressing endothelial cell
RT precursors.";
RL Development 125:743-752(1998).
DR EMBL; Y15837; CAA75799.1; --
DR HSP; P49763; IEFV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR004153; CXKC repeat.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXKC; 6.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS02078; PDGF_2; 1.
KW Signal.
FT SIGNAL 1 31 POTENTIAL.
FT CHAIN 111 418 VASCULAR ENDOTHELIAL GROWTH FACTOR C.
SQ SEQUENCE 418 AA; 46839 MW; 099BFCC79151BF2B CRC64;

Query Match 59.08; Score 59; DB 13; Length 418;
Best Local Similarity 71.4%; Pred. No. 0.043;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELGKSTNTFCCKPPC 17
DB 142 EFGATNTFFKPPC 155

RESULT 6
Q9XS50 PRELIMINARY; PRT; 420 AA.
ID Q9XS50
AC Q9XS50;
DT 01-NOV-1999 (TrEMBLrel. 12, Created)
DT 01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor C precursor.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=20044783; PubMed=10575000;
RA Yonekura H., Sakurai S., Liu X., Migita H., Wang H., Yamagishi S.,
RA Nomura M., Abedin M.J., Unoki H., Yamamoto Y., Yamamoto H.;
RT "Placenta growth factor and vascular endothelial growth factor B and C
RT expression in microvascular endothelial cells and pericytes.
RT Implication in autocrine and paracrine regulation of angiogenesis.";
RL J. Biol. Chem. 274:35172-35178(1999).
DR EMBL; AB004275; BAA7687.1; --
DR HSP; P01127; IPDG.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR004153; CXKC repeat.
DR InterPro; IPR002400; GF_cysknot.

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DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF03128; CXKC; 5.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS02078; PDGF_2; 1.
KW Signal.
FT SIGNAL 1 20 POTENTIAL.
FT CHAIN 21 420 VASCULAR ENDOTHELIAL GROWTH FACTOR C.
SQ SEQUENCE 420 AA; 46681 MW; 58BA84317A3C8E2D CRC64;

Query Match 59.08; Score 59; DB 6; Length 420;
Best Local Similarity 71.4%; Pred. No. 0.043;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELGKSTNTFCCKPPC 17
DB 144 EFGATNTFFKPPC 157

RESULT 7
Q7T3I6 PRELIMINARY; PRT; 396 AA.
ID Q7T3I6
AC Q7T3I6;
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Vascular endothelial growth factor C.
OS Brachydanio rerio (Zebrafish) (Danio rerio).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Danio.
OX NCBI_TaxID=7955;
RN [1]
RP SEQUENCE FROM N.A.
RA Olofsson B., Ober E.A., Makinen T., Jin S.-W., Shoji W., Koh G.Y.,
RA Alitalo K., Stainier D.Y.R.;
RT "Vascular endothelial growth factor C regulates endodermal
RT morphogenesis in zebrafish.";
RL Submitted (JAN-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF466147; AAP44161.1; --
SQ SEQUENCE 396 AA; 45287 MW; C20F9B3F0307D7C1 CRC64;

Query Match 51.5%; Score 51.5; DB 13; Length 396;
Best Local Similarity 58.8%; Pred. No. 0.9;
Matches 10; Conservative 3; Mismatches 1; Indels 3; Gaps 1;

QY 4 ELGK---STNTFCCKPPC 17
DB 127 DVGKFGATNTFFKPPC 143

RESULT 8
Q9CUD6 PRELIMINARY; PRT; 888 AA.
ID Q9CUD6
AC Q9CUD6;
DT 01-JUN-2001 (TrEMBLrel. 17, Created)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Adult male testis cDNA, RIKEN full-length enriched library,
DE clone:4933403G14 product:hypothetical serine-rich region containing
DE protein, full insert sequence (Fragment).
GN 4933403G14RIK.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Testis;
RA Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,

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Best Local Similarity 69.2%; Pred. No. 0.79;
Matches 9; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFC 13
Db 98 CKYKJKSTNTFC 110

RESULT 11

Q9LTJ8 PRELIMINARY; PRT; 746 AA.
ID Q9LTJ8
AC Q9LTJ8
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DE Genomic DNA, chromosome 5, BAC clone.F17P19.
OS Arabidopsis thaliana (Mouse-ear cress).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC eurosids II; Brassicales; Brassicaceae; Arabidopsis.
OX NCBI_TaxID=3702;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Columbia.
RA Kaneko T., Katoh T., Asamizu E., Sato S., Nakamura Y., Kotani H.,
RA Tabata S.;
RT "Structural analysis of Arabidopsis thaliana chromosome 5. XI";
RL Submitted (APR-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB025603; BAA97466.1; --
SQ SEQUENCE 746 AA; 82656 MW; A0EACB409EB5953A CRC64;

Query Match 48.5%; Score 48.5; DB 10; Length 746;
Best Local Similarity 35.7%; Pred. No. 6;
Matches 10; Conservative 3; Mismatches 4; Indels 11; Gaps 1;

QY 1 CASELGKSTNTFC-----CKPPC 17

Db 583 CSEVMEKSTNSFSAFDSTLADLCKDPC 610

RESULT 12

Q8L791 PRELIMINARY; PRT; 746 AA.
ID Q8L791
AC Q8L791
DT 01-OCT-2002 (TrEMBLrel. 22, Created)
DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Hypothetical protein.
GN AT5G2230.
OS Arabidopsis thaliana (Mouse-ear cress).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC eurosids II; Brassicales; Brassicaceae; Arabidopsis.
OX NCBI_TaxID=3702;
RN [1]
RP SEQUENCE FROM N.A.
RA Southwick A., Nguyen M., Tripp M., Palm C.J., Jones T., Wu T.,
RA Carninci P., Chen H., Cheuk R., Chan M.M., Chang C.H., Dale J.M.,
RA Deng J.M., Hayashizaki Y., Huan V.W., Lee J.M., Ishida J., Kamiya A.,
RA Kawai J., Kim C.J., Narusaka M., Quach H.L., Sakurai T., Satou M.,
RA Seki M., Shinn P., Tang C.C., Torum M., Wallender E.K., Wong C.,
RA Wu H.C., Yamada K., Yu G., Yuan S., Shinozaki K., Ecker J.,
RA Theologis A., Davis R.W.;
RL Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
RN [2]
RP SEQUENCE FROM N.A.
RA Nguyen M., Karlin-Neumann G., Southwick A., Tripp M., Miranda M.,
RA Palm C.J., Bowser L., Jones T., Banh J., Carninci P., Chen H.,
RA Cheuk R., Chung M.K., Hayashizaki Y., Ishida J., Kamiya A., Kawai J.,
RA Kim C., Lin J., Liu S.X., Narusaka M., Pham P.K., Sakano H.,
RA Sakurai T., Satou M., Seki M., Shinn P., Yamada K., Shinozaki K.,
RA Ecker J., Theologis A., Davis R.W.;
RL Submitted (SEP-2002) to the EMBL/GenBank/DBJ databases.

DR EMBL; AY136403; AAM97069.1; --
DR EMBL; BT00226; AAN15545.1; --
KW Hypothetical protein.
SQ SEQUENCE 746 AA; 82598 MW; D3E6FBB7C9161084 CRC64;

Query Match 48.5%; Score 48.5; DB 10; Length 746;
Best Local Similarity 35.7%; Pred. No. 6;
Matches 10; Conservative 3; Mismatches 4; Indels 11; Gaps 1;

QY 1 CASELGKSTNTFC-----CKPPC 17

Db 583 CSEVMEKSTNSFSAFDSTLADLCKDPC 610

RESULT 13

OL8118 PRELIMINARY; PRT; 330 AA.
ID OL8118
AC OL8118
DT 01-JAN-1998 (TrEMBLrel. 05, Created)
DT 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE T23F1.6 protein.
GN T23F1.6.
OS Caenorhabditis elegans.
OC Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
OC Rhabditidae; Pelodierinae; Caenorhabditis.
OX NCBI_TaxID=6239;
RN [1]
RP SEQUENCE FROM N.A.
RA Wilkinson J.;
RL Submitted (OCT-1996) to the EMBL/GenBank/DBJ databases.
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=99069613; PubMed=9851916;
RA none;
RT "Genome sequence of the nematode C.elegans: A platform for
RT investigating biology";
RL Science 282:2012-2018(1998).
DR EMBL; Z81129; CAB03405.1; --
DR PIR; T25169; T25169.
DR WormPep; T23F1.6; CE14080.
DR InterPro; IPR001341; DUF139.
DR Pfam; PF02363; C tripleX; 8.
SQ SEQUENCE 330 AA; 36605 MW; F043B1A90D3A8FE9 CRC64;

Query Match 48.0%; Score 48; DB 5; Length 330;
Best Local Similarity 41.2%; Pred. No. 3-2;
Matches 7; Conservative 4; Mismatches 6; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCCKPPC 17

Db 80 CSQQCOSNTNTQCPTC 96

RESULT 14

Q81WU7 PRELIMINARY; PRT; 198 AA.
ID Q81WU7
AC Q81WU7
DT 01-JUN-2003 (TrEMBLrel. 24, Created)
DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Ada regulatory protein/6-O-methylguanine-DNA methyltransferase.
GN ADAA OR B4369.
OS Bacillus anthracis (strain Ames).
OC Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
OX NCBI_TaxID=198094;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=22608414; PubMed=12721629;
RA Read T.D., Peterson S.N., Tourasse N., Baillie L.W., Paulsen I.T.,
RA Nelson K.E., Tetelin H., Fouts D.E., Eisen J.A., Gill S.R.,
RA Holtzapple E.K., Okstad O.A., Helgason E., Rilstone J., Wu M.,
RA Kolonay J.F., Beanan M.J., Dodson R.J., Brinkac L.M., Gwinn M.,

RA DeBoy R.T., Madpu R., Daugherty S.C., Durkin A.S., Haft D.H.,
RA Nelson W.C., Peterson J.D., Pop M., Khouri H.M., Radune D.,
RA Benton J.L., Mahmoud Y., Jiang L., Hance I.R., Weidman J.F.,
RA Berry K.J., Plaut R.D., Wolf A.M., Watkins K.L., Nierman W.C.,
RA Hazen A., Cline R., Redmond C., Thwaite J.R., White O., Salzberg S.L.,
RA Thomson B., Friedlander A.M., Koehler T.M., Hanna P.C., Kolsto A.-B.,
RA Fraser C.M.;
RT "The genome sequence of *Bacillus anthracis* Ames and comparison to
RT "closely related bacteria.";
RL Nature 423:81-86(2003).
DR EMBL: AE017036; AAP27604.1; --
DR TIGR: BA3869;
DR GO: GO:0005622; C:intracellular; IEA.
DR GO: GO:0008168; F:methyltransferase activity; IEA.
DR GO: GO:0003700; F:transcription factor activity; IEA.
DR GO: GO:0016740; F:transferase activity; IEA.
DR GO: GO:0008270; F:zinc ion binding; IEA.
DR GO: GO:0006281; P:DNA repair; IEA.
DR GO: GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
DR InterPro: IPR004026; Ada_Zn_bind.
DR InterPro: IPR000005; HTHArac.
DR Pfam: PF02805; Ada_Zn_binding; 1.
DR Pfam: PF00165; HTH_Arac; 2.
DR PRINTS: PR00032; HTHARAC.
DR SMART: SM00342; HTH_ARAC; 1.
DR PROSITE: PS00041; HTH_ARAC_FAMILY_1; 1.
DR PROSITE: PS01124; HTH_ARAC_FAMILY_2; 1.
DR KW Methyltransferase; Transferase; Complete proteome.
SQ SEQUENCE 198 AA; 23280 MW; A8BECLA5A353170A CRC64;

Query Match 46.0%; Score 46; DB 16; Length 198;
Best Local Similarity 63.6%; Pred. No. 4.3; Indels 0; Gaps 0;
Matches 7; Conservative 1; Mismatches 3;

Qy 7 KSTNTFCCKPPC 17
||| ||| |||
Db 32 KSTGVFCRPS 42

RESULT 15
Q8MD06 PRELIMINARY; PRT; 326 AA.
AC Q8MD06;
DT 01-OCT-2002 (TRENBLrel. 22, Created)
DT 01-OCT-2002 (TRENBLrel. 22, Last sequence update)
DT 01-OCT-2003 (TRENBLrel. 25, Last annotation update)
DE Chitinase.
OS Leucaena glauca (white popinac) (Leucaena leucocephala).
OG Chloroplast.
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC eucosids I; Fabales; Fabaceae; Mimosoideae; Mimosaceae; Leucaena.
OX NCBI_TaxID=3866;
RN [1]
RP SEQUENCE FROM N.A.
RA Ketudat-Cairns J.R., Mizuno K., Fujimura T., Sriyotha P.;
RT "Cloning, Expression, and Characterization of an Anti-fungal Chitinase
RT from *Leucaena leucocephala* de Wit.";
RL Biosci. Biotechnol. Biochem. 0:0-0(2002).
DR EMBL: AF513017; AAM49597.2; --
DR GO: GO:0009507; C:chloroplast; IEA.
DR GO: GO:0008061; F:chitin binding; IEA.
DR GO: GO:0004568; F:chitinase activity; IEA.
DR GO: GO:0016998; P:cell wall catabolism; IEA.
DR GO: GO:0006032; P:chitin catabolism; IEA.
DR GO: GO:0009613; P:response to pest/pathogen/parasite; IEA.
DR InterPro: IPR001002; Chitin_binding_1.
DR InterPro: IPR000726; Glyco_hydro_19.
DR Pfam: PF00187; Chitin_bind_1; 1.
DR Pfam: PF00182; Glyco_hydro_19; 1.
DR PRINTS: PR00451; CHITINBINDNG.
DR ProDom: PD000609; Chitin binding_1; 1.
DR ProDom: PD354900; Glyco_hydro_19; 1.

DR SMART: SM00270; ChitBD1; 1.
DR PROSITE: PS00773; CHITINASE_19_1; 1.
DR PROSITE: PS00774; CHITINASE_19_2; 1.
DR PROSITE: PS00026; CHITIN_BINDING; 1.
KW Chitin-binding; Chloroplast.
SQ SEQUENCE 326 AA; 34908 MW; F73514268A84A46D CRC64;

Query Match 46.0%; Score 46; DB 8; Length 326;
Best Local Similarity 47.4%; Pred. No. 7.2; Indels 2; Gaps 1;
Matches 9; Conservative 2; Mismatches 6;

Qy 1 CASELG--KSTNTFCCKPPC 17
||| ||| ||| |||
Db 41 CCSQFGWCGSTNDYCGPGC 59

Search completed: September 5, 2004, 09:59:58
Job time : 40.4646 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:37:49 ; Search time 55,8081 Seconds
(without alignments)
86.068 Million cell updates/sec

Title: US-09-761-636A-8

Perfect score: 100

Sequence: 1 CASELGKSTNTFCCKPPC 17

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

A Geneseq_29Jan04:*

1: Geneseqp1980s:*

2: Geneseqp1990s:*

3: Geneseqp2000s:*

4: Geneseqp2001s:*

5: Geneseqp2002s:*

6: Geneseqp2003as:*

7: Geneseqp2003bs:*

8: Geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	100	100.0	17	4	AAU04527
2	97	97.0	17	4	AAU04550
3	97	97.0	17	4	AAU04546
4	93	93.0	17	4	AAU04547
5	93	93.0	17	4	AAU04551
6	93	93.0	17	4	AAU04549
7	89	89.0	17	4	AAU04548
8	80	80.0	73	4	AAU04522
9	80	80.0	96	4	AAU04520
10	80	80.0	109	2	AAU04520
11	80	80.0	109	3	AAU04520
12	80	80.0	109	6	AAU04520
13	80	80.0	109	6	AAU04520
14	80	80.0	109	6	AAU04520
15	80	80.0	109	6	AAU04520
16	80	80.0	109	6	AAU04520
17	80	80.0	109	6	AAU04520
18	80	80.0	109	6	AAU04520
19	80	80.0	109	6	AAU04520
20	80	80.0	109	6	AAU04520
21	80	80.0	109	6	AAU04520
22	80	80.0	109	6	AAU04520
23	80	80.0	109	6	AAU04520
24	80	80.0	109	6	AAU04520
25	80	80.0	109	6	AAU04520

26	80	80.0	354	4	AAU04527	Human VEG
27	80	80.0	354	4	AAU04527	Human VEG
28	80	80.0	354	5	ABG33055	Human VEG
29	80	80.0	354	5	ABG32046	Human VEG
30	80	80.0	354	6	ABB84623	Human VEG
31	80	80.0	354	7	ADD08950	Human VEG
32	80	80.0	620	2	AAU14994	Human VEG
33	77	77.0	110	5	AAU47933	Human VEG
34	77	77.0	178	2	AAU08287	Human VEG
35	77	77.0	321	2	AAU53243	Human VEG
36	77	77.0	321	5	AAU47931	Human VEG
37	77	77.0	326	2	AAU44296	Human VEG
38	77	77.0	337	2	AAU08286	Human VEG
39	77	77.0	358	2	AAU14992	Human VEG
40	77	77.0	358	2	AAU44295	Human VEG
41	77	77.0	358	2	AAU53242	Human VEG
42	77	77.0	358	5	AAU47930	Human VEG
43	72	72.0	13	4	AAU04524	Human VEG
44	69	69.0	13	4	AAU04534	Human VEG
45	65	65.0	13	4	AAU04535	Human VEG

ALIGNMENTS

RESULT 1

AAU04527
ID AAU04527 standard; protein; 17 AA.

XX AC AAU04527;

DT 26-SEP-2001 (first entry)

XX DE VEGF based bicyclic dimeric peptide #1.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
neovascularisation; lymphangiogenesis; psoriasis; tumour;
diabetes induced neovascular sequelae; rheumatoid arthritis;
diabetic retinopathy; chronic inflammation; cyclic.

OS Synthetic.

XX Key Location/Qualifiers

FT Disulfide-bond 1..13 /note= "This bond cyclises the peptide"

FT Disulfide-bond 17

FT /note= "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form a dimeric peptide, or to residue 1 of the sequence appearing as AAU04528, also forming a dimeric peptide"

PN WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclizing a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues.

XX Claim 59; Page 32; 102pp; English.

CC The sequence represents a dimeric bicyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGF (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides), and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy

XX SQ Sequence 17 AA;

Query Match 100.0%; Score 100; DB 4; Length 17;
 Best Local Similarity 100.0%; Pred. No. 6.2e-08;
 Matches 17; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFCRPPC 17

Db 1 CASELGKSTNTFCRPPC 17

RESULT 2

AAU04550
 ID AAU04550 standard; peptide; 17 AA.

AC AAU04550;

DT 26-SEP-2001 (first entry)

XX VEGF based bicyclic dimeric peptide #7.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.

XX Synthetic.

XX Key Location/Qualifiers

FT Disulfide-bond 1..13 /note= "This bond cyclises the peptide"

FT Disulfide-bond 17

FT /note= "A disulfide bond forms between residue 17 and
 residue 1 of the sequence appearing as AAU04528, forming
 a dimeric peptide"

XX WO200152875-A1.

PN 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

PR 16-MAY-2000; 2000US-0204590P.

XX

PA (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.

XX Example 26; Page 49; 102pp; English.

XX The sequence represents a dimeric bicyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGF (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides), and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy

XX SQ Sequence 17 AA;

Query Match 97.0%; Score 97; DB 4; Length 17;

Best Local Similarity 94.1%; Pred. No. 1.7e-07;

Matches 16; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFCRPPC 17

Db 1 CASELGKSTNTFCRPPC 17

RESULT 3

AAU04546

ID AAU04546 standard; peptide; 17 AA.

XX AAU04546;

XX 26-SEP-2001 (first entry)

XX VEGF based bicyclic dimeric peptide #3.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.

XX Synthetic.

XX Key Location/Qualifiers

FT Disulfide-bond 1..13

FT /note= "This bond cyclises the peptide"

FT Disulfide-bond 17

FT /note= "A disulfide bond forms between residue 17 and
 FT residue 17 of an identical peptide to form a dimeric
 FT peptide"
 XX
 XX WO200152875-A1.
 XX
 XX 26-JUL-2001.
 XX
 XX 18-JAN-2001; 2001WO-US001533.
 XX
 XX 18-JAN-2000; 2000US-0176293P.
 XX 16-MAY-2000; 2000US-0204590P.
 XX
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX
 XX Achen MG, Hughes RA, Stacker S, Cendron A;
 XX WPI; 2001-442248/47.
 XX
 XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 FT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 FT from an exposed loop of a growth factor protein by oxidizing the cysteine
 FT residues.
 XX
 XX Example 26; Page 49; 102pp; English.
 XX
 XX The sequence represents a dimeric bicyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGF (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX
 XX Sequence 17 AA;
 SQ
 Query Match 97.0%; Score 97; DB 4; Length 17;
 Best Local Similarity 94.1%; Pred. No. 1.7e-07;
 Matches 16; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CASELGKSTNTFCCKPPC 17
 ||:|||||
 Db 1 CATELGKSTNTFCCKPPC 17
 ||:|||||
 RESULT 4
 ID AAU04547
 XX AAU04547 standard; peptide; 17 AA.
 AC
 XX AAU04547;
 XX
 XX 26-SEP-2001 (first entry)
 XX

DE VEGF based bicyclic dimeric peptide #4.
 XX
 XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.
 XX
 XX Synthetic.
 XX
 XX Key Location/Qualifiers
 FH Disulfide-bond 1..13
 FT /note= "This bond cyclises the peptide"
 FT Disulfide-bond 17
 FT /note= "A disulfide bond forms between residue 17 and
 FT residue 17 of an identical peptide to form a dimeric
 FT peptide"
 XX
 XX WO200152875-A1.
 XX
 XX 26-JUL-2001.
 XX
 XX 18-JAN-2001; 2001WO-US001533.
 XX
 XX 18-JAN-2000; 2000US-0176293P.
 XX 16-MAY-2000; 2000US-0204590P.
 XX
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX
 XX Achen MG, Hughes RA, Stacker S, Cendron A;
 XX WPI; 2001-442248/47.
 XX
 XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 FT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 FT from an exposed loop of a growth factor protein by oxidizing the cysteine
 FT residues.
 XX
 XX Example 26; Page 49; 102pp; English.
 XX
 XX The sequence represents a dimeric bicyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGF (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX
 XX Sequence 17 AA;
 SQ
 Query Match 93.0%; Score 93; DB 4; Length 17;
 Best Local Similarity 88.2%; Pred. No. 6.9e-07;
 Matches 15; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCPPC 17
 Db 1 CASELGKSTNTFCPPC 17

RESULT 5
 AAU04551
 ID AAU04551 standard; peptide; 17 AA.
 XX
 AC AAU04551;
 XX
 DT 26-SEP-2001 (first entry)
 XX
 DE VEGF based bicyclic dimeric peptide #8.
 XX
 KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.
 XX
 OS Synthetic.
 XX

Key Location/Qualifiers
 Disulfide-bond 1. .13
 Disulfide-bond 17 /note= "This bond cyclises the peptide"
 Disulfide-bond 17 /note= "A disulfide bond forms between residue 17 and residue 1 of the sequence appearing as AAU04528, forming a dimeric peptide"
 WO200152875-A1.
 XX
 PD 26-JUL-2001.
 XX
 XX 18-JAN-2001; 2001WO-US001533.
 XX
 PR 18-JAN-2000; 2000US-0176293P.
 PR 16-MAY-2000; 2000US-0204590P.
 XX
 PA (LUDW-) LUDWIG INST CANCER RES.
 XX
 PI Achen MG, Hughes RA, Stacker S, Cendron A;
 XX
 DR WPI; 2001-442248/47.
 XX
 PT Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.
 XX
 PS Example 26; Page 49; 102pp; English.
 XX

The sequence represents a dimeric bicyclic peptide of the invention,
 whose 3-dimensional structure is modelled on the expose loop of human
 VEGFD (vascular endothelial growth factor). The invention relates to a
 method of producing a monomeric monocyclic peptide by a measuring beta-
 beta carbon separation distances on opposite antiparallel strands of a
 peptide loop fragment from an exposed loop of a growth factor protein and
 cyclising the peptide by oxidising the cysteine residues. The monocyclic
 peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 peptides) and a cyclic peptide with at least one amino acid deleted prior
 to cyclisation are used to interfere with angiogenesis,
 neovascularisation or lymphangiogenesis in a mammal with a condition
 characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,

or brain. The peptides are used to image blood vessels and lymphatic
 vasculature. The monomeric and bicyclic peptides are used to interfere
 with at least one biological activity induced by VEGF, VEGF-C or -D and
 are also used in combination with an anti-inflammatory agent, to treat a
 chronic inflammation, especially rheumatoid arthritis, psoriasis and
 diabetic retinopathy

XX
 SQ Sequence 17 AA;
 Query Match 93.0%; Score 93; DB 4; Length 17;
 Best Local Similarity 88.2%; Pred. No. 6.9e-07;
 Matches 15; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCPPC 17
 Db 1 CASELGKSTNTFCPPC 17

RESULT 6
 AAU04549
 ID AAU04549 standard; peptide; 17 AA.
 XX
 AC AAU04549;
 XX
 DT 26-SEP-2001 (first entry)
 XX
 DE VEGF based bicyclic dimeric peptide #6.
 XX
 KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.
 XX
 OS Synthetic.
 XX

Key Location/Qualifiers
 Disulfide-bond 1. .13
 Disulfide-bond 17 /note= "This bond cyclises the peptide"
 Disulfide-bond 17 /note= "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form a dimeric peptide"
 WO200152875-A1.
 XX
 PD 26-JUL-2001.
 XX
 XX 18-JAN-2001; 2001WO-US001533.
 XX
 PR 18-JAN-2000; 2000US-0176293P.
 PR 16-MAY-2000; 2000US-0204590P.
 XX
 PA (LUDW-) LUDWIG INST CANCER RES.
 XX
 PI Achen MG, Hughes RA, Stacker S, Cendron A;
 XX
 DR WPI; 2001-442248/47.
 XX
 PT Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.
 XX
 PS Example 26; Page 49; 102pp; English.
 XX

The sequence represents a dimeric bicyclic peptide of the invention,
 whose 3-dimensional structure is modelled on the expose loop of human
 VEGFD (vascular endothelial growth factor). The invention relates to a
 method of producing a monomeric monocyclic peptide by a measuring beta-
 beta carbon separation distances on opposite antiparallel strands of a
 peptide loop fragment from an exposed loop of a growth factor protein and
 cyclising the peptide by oxidising the cysteine residues. The monocyclic
 peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 peptides) and a cyclic peptide with at least one amino acid deleted prior
 to cyclisation are used to interfere with angiogenesis,
 neovascularisation or lymphangiogenesis in a mammal with a condition
 characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,

CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX
 SQ Sequence 17 AA;

Query Match 93.0%; Score 93; DB 4; Length 17;
 Best Local Similarity 88.2%; Pred. No. 6.9e-07;
 Matches 15; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCCKPPC 17
 |||||:||||:|||||

Db 1 CASELGKSTNTFCCKPPC 17
 |||||:||||:|||||

RESULT 7

ID AAU04548
 AAU04548 standard; peptide; 17 AA.

AC AAU04548;

DT 26-SEP-2001 (first entry)

DE VEGF based bicyclic dimeric peptide #5.

KW Human; VEGF; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation; cyclic.

OS Synthetic.

XX Key Location/Qualifiers

FH Disulfide-bond 1..13

FT /note= "This bond cyclises the peptide"

FT Disulfide-bond 17

FT /note= "A disulfide bond forms between residue 17 and
 FT residue 17 of an identical peptide to form a dimeric
 FT peptide"

XX WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 FT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment

PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.

XX Example 26; Page 49; 102pp; English.

XX The sequence represents a dimeric bicyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the exposed loop of human
 CC VEGFD (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides) dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy
 XX

SQ Sequence 17 AA;

Query Match 89.0%; Score 89; DB 4; Length 17;

Best Local Similarity 82.4%; Pred. No. 2.7e-06;

Matches 14; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCCKPPC 17
 |||||:||||:|||||

Db 1 CASDVCKSTNTWCKPPC 17
 |||||:||||:|||||

RESULT 8

ID AAU04522

XX AAU04522 standard; protein; 73 AA.

XX AC AAU04522;

DT 26-SEP-2001 (first entry)

DE Human VEGF-D amino acids Val101-Thr 173.

KW Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation.

XX Homo sapiens.

XX WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stacker S, Cendron A;

XX WPI; 2001-442248/47.
 XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.
 XX Example 1; Page 90-91; 102pp; English.
 PS The sequence represents Human VEGF-D (vascular endothelial growth factor)
 XX amino acids Val101-Thr 173, used together with the C-terminal 23 residues
 CC of VEGF to make a hybrid theoretical molecule for 3 dimensional
 CC modelling. The sequence is used in a method of producing a monomeric
 CC monocyclic peptide by a measuring beta-beta carbon separation from an
 CC on opposite antiparallel strands of a peptide loop fragment from an
 CC exposed loop of a growth factor protein and cyclising the peptide by
 CC oxidising the cysteine residues. The monocyclic peptides, dimeric
 CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
 CC peptide with at least one amino acid deleted prior to cyclisation are
 CC used to interfere with angiogenesis, neovascularisation or
 CC lymphangiogenesis in a mammal with a condition characterised by
 CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
 CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
 CC malignant or benign tumour, post-recovery cerebrovascular accident, post-
 CC angioplasty restenosis, head, heat or cold trauma, substance-induced
 CC neovascularisation of the liver, excessive hormone-related angiogenic
 CC dysfunction, diabetes induced neovascular sequelae, hypertension induced
 CC neovascular sequelae, or chronic liver infection. The peptides are also
 CC used to modulate vascular permeability in a mammal (the mammal has a
 CC condition characterised by fluid accumulation in peripheral limbs or in
 CC lungs, peritoneal cavity, pleura, or brain. The peptides are used to
 CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
 CC peptides are used to interfere with at least one biological activity
 CC induced by VEGF, VEGF-C or -D and are also used in combination with an
 CC anti-inflammatory agent, to treat a chronic inflammation, especially
 CC rheumatoid arthritis, psoriasis and diabetic retinopathy
 XX Sequence 73 AA;
 SQ
 Query Match 80.0%; Score 80; DB 4; Length 73;
 Best Local Similarity 93.8%; Pred. No. 0.00024;
 Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 2 ASELGKSTNTFFKPPC 17
 Db |||||
 21 ASELGKSTNTFFKPPC 36
 RESULT 9
 AAU04520
 ID AAU04520 standard; protein; 96 AA.
 AC AAU04520;
 XX 26-SEP-2001 (first entry)
 XX Human VEGF-D amino acids Val101-PRO186.
 DE Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
 XX neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation.
 XX Homo sapiens.
 OS WO200152875-A1.
 XX 26-JUL-2001.
 PD 18-JAN-2001; 2001WO-US001533.
 XX 18-JAN-2000; 2000US-0176293P.
 PF

PR 16-MAY-2000; 2000US-0204590P.
 XX (LUDW-) LUDWIG INST CANCER RES.
 PA Achen MG, Hughes RA, Stacker S, Cendron A;
 PI WPI; 2001-442248/47.
 XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.
 XX Example 1; Page 89; 102pp; English.
 PS The sequence represents Human VEGF-D (vascular endothelial growth factor)
 XX amino acids Val101-PRO186. The sequence is used in a method of producing
 CC a monomeric monocyclic peptide by a measuring beta-beta carbon separation
 CC distances on opposite antiparallel strands of a peptide loop fragment
 CC from an exposed loop of a growth factor protein and cyclising the peptide
 CC by oxidising the cysteine residues. The monocyclic peptides, dimeric
 CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
 CC peptide with at least one amino acid deleted prior to cyclisation are
 CC used to interfere with angiogenesis, neovascularisation or
 CC lymphangiogenesis in a mammal with a condition characterised by
 CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
 CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
 CC malignant or benign tumour, post-recovery cerebrovascular accident, post-
 CC angioplasty restenosis, head, heat or cold trauma, substance-induced
 CC neovascularisation of the liver, excessive hormone-related angiogenic
 CC dysfunction, diabetes induced neovascular sequelae, hypertension induced
 CC neovascular sequelae, or chronic liver infection. The peptides are also
 CC used to modulate vascular permeability in a mammal (the mammal has a
 CC condition characterised by fluid accumulation in peripheral limbs or in
 CC lungs, peritoneal cavity, pleura, or brain. The peptides are used to
 CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
 CC peptides are used to interfere with at least one biological activity
 CC induced by VEGF, VEGF-C or -D and are also used in combination with an
 CC anti-inflammatory agent, to treat a chronic inflammation, especially
 CC rheumatoid arthritis, psoriasis and diabetic retinopathy
 XX Sequence 96 AA;
 SQ
 Query Match 80.0%; Score 80; DB 4; Length 96;
 Best Local Similarity 93.8%; Pred. No. 0.00031;
 Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 2 ASELGKSTNTFFKPPC 17
 Db |||||
 21 ASELGKSTNTFFKPPC 36
 RESULT 10
 AAY23889
 ID AAY23889 standard; protein; 109 AA.
 AC AAY23889;
 XX 21-SEP-1999 (first entry)
 XX Human vascular endothelial growth factor (VEGF)-D.
 DE Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
 KW tumour; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
 KW wound healing; lymphedema; scleroderma; anhydrotic ectodermal dysplasia.
 XX Homo sapiens.
 OS WO9933485-A1.
 XX 08-JUL-1999.
 PD 23-DEC-1998; 98WO-US027373.
 PF

XX 24-DEC-1997; 97AU-00001131.
 PR 29-MAY-1998; 98US-0087392P.
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX Achen MG, Stacker SA, Alitalo K;
 XX WPI; 1999-405368/34.
 XX A human cell line stably expressing vascular endothelial growth factor D,
 PT useful for treating melanomas or tumors expressing VEGF-D.
 XX Claim 6; Page 72; 79pp; English.
 PS This sequence represents human vascular endothelial growth factor
 XX (VEGF)-D. The specification describes a human cell line which stably
 CC expresses VEGF-D, or fragments/analogs having VEGF-D biological
 CC activity. VEGF-D antagonists, e.g. antisense nucleic acids or triplex
 CC DNA, VEGF-D variants or antibodies (especially chimeric antibodies), are
 CC useful for the treatment or alleviation of malignant melanomas, tumours
 CC or psoriasis. Angiogenesis and lymphangiogenesis stimulating amounts of
 CC VEGF-D can be administered to enhance the acceptance and/or healing of
 CC skin grafts or to stimulate the healing of a surgical or traumatic wound
 CC to the skin. Lymphangiogenesis stimulating amounts of VEGF-D can be used
 CC to treat lymphedema. Endothelial proliferation stimulating amounts of
 CC VEGF-D are used to treat scleroderma. Vascularisation stimulating amounts
 CC of VEGF-D can be used to treat anhydrotic ectodermal dysplasia. VEGF-D
 CC antibodies are useful for detecting tumours expressing VEGF-D. Fully-
 CC processed VEGF-D can be used to stimulate at least one VEGF-D bioactivity
 CC chosen from endothelial cell proliferation, migration, survival and
 CC differentiation and lymphangiogenesis without inducing vascular
 CC permeability
 XX SQ Sequence 109 AA;

Query Match 80.0%; Score 80; DB 2; Length 109;
 Best Local Similarity 93.8%; Pred. No. 0.00036;
 Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFCCKPPC 17
 DB 29 ASELGKSTNTFFKPPC 44

RESULT 11
 AAB11931
 ID AAB11931 standard; protein; 109 AA.
 AC AAB11931;
 XX 20-NOV-2000 (first entry)
 XX Human truncated VEGF-D.

XX Truncated VEGF-D; vascular endothelial growth factor; human;
 KW monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3;
 KW vascular permeability disorder; endothelial cell proliferative disorder;
 KW angiogenic disorder; lymphangiogenic disorder;
 KW neovascularisation disorder; endothelial cell differentiation disorder;
 KW cancer; diabetic retinopathy; psoriasis; arthropathy; pulmonary oedema;
 KW detection; diagnosis; imaging; lymphatic vasculature.
 XX Homo sapiens.
 OS WO200037025-A2.
 XX 29-JUN-2000.
 XX 21-DEC-1999; 99WO-US031332.
 XX 21-DEC-1998; 98US-0113254P.
 PR 17-MAY-1999; 99US-0134556P.

XX (LUDW-) LUDWIG INST CANCER RES.
 PA Achen MG, Stacker SA;
 PI WPI; 2000-442498/38.
 XX Novel compositions comprising antibodies reactive to vascular endothelial
 PT growth factor-D, useful for treating, e.g. angiogenesis, lymphangiogenesis
 PT and neovascularization disorders.
 XX Claim 1; Fig 1; 44pp; English.

XX This sequence represents a 109 amino acid truncated human VEGF-D
 CC (vascular endothelial growth factor D), lacking both the N- and C-
 CC terminal regions. The invention relates to a monoclonal antibody, or
 CC fragments thereof, which is specifically reactive with the truncated
 CC human VEGF-D, and methods of preparing the antibody. The antibody of the
 CC invention interferes with the binding of VEGF-D to the VEGF receptors
 CC VEGFR-2 and VEGFR-3, but does not interfere with the binding of VEGF to
 CC these receptors and additionally is not reactive with VEGF-C. The
 CC antibody may be used to treat disorders associated with vascular
 CC permeability, endothelial cell proliferation, angiogenesis,
 CC lymphangiogenesis, neovascularisation and endothelial cell
 CC differentiation, especially cancer, diabetic retinopathy, psoriasis, and
 CC arthropathies. The antibody may also be used to treat fluid accumulation
 CC in the heart and/or lung via modulation of vascular permeability. It may
 CC additionally be used to detect VEGF-D and may be used to image lymphatic
 CC vasculature in tissue
 XX SQ Sequence 109 AA;

Query Match 80.0%; Score 80; DB 3; Length 109;
 Best Local Similarity 93.8%; Pred. No. 0.00036;
 Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFCCKPPC 17
 DB 29 ASELGKSTNTFFKPPC 44

RESULT 12
 ABB84621
 ID ABB84621 standard; protein; 109 AA.
 AC ABB84621;
 XX 01-APR-2003 (first entry)
 XX Human wild-type VEGF-D monomer SEQ ID 3.

XX Human; single-chain; extracellular ligand-binding domain; VEGF;
 KW vascular endothelial growth factor; VEGF type 2 receptor; KDR; Flt-4;
 KW VEGF type 3 receptor; VEGF-C; VEGF-D; signal transduction; angiogenesis;
 KW lymphangiogenesis.
 XX Homo sapiens.
 OS Key
 XX Location/Qualifiers
 FH 8. .18
 FT Region /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT 36. .49
 FT Region /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT 55. .60
 FT Region /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT Misc-difference 60
 FT /note= "This residue is described as Gln in Claim 9"
 FT 70. .86
 FT Region /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"

XX PN WO200281520-A2.
 XX PD 17-OCT-2002.
 XX PF 08-APR-2002; 2002WO-DK000233.
 XX PR 06-APR-2001; 2001DK-00000578.
 XX PR 06-APR-2001; 2001US-0282239P.
 XX PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX PI Boesen TP, Halkier T;
 XX DR WPI; 2003-058505/05.
 XX DR
 XX PN Novel single-chain dimeric polypeptide for inhibiting angiogenesis, binds
 FT to extracellular ligand-binding domain of vascular endothelial growth
 FT factor type 2/type 3 receptor but does not activate the receptor.
 XX Claim 9; Page 66; 71pp; English.
 XX This invention describes a novel single-chain dimeric polypeptide which
 CC binds to extracellular ligand-binding domain of vascular endothelial
 CC growth factor (VEGF) type 2 receptor (KDR) or VEGF type 3 receptor (Flt-
 CC 4). The polypeptide of the invention comprises two receptor-binding sites
 CC of which one is capable of binding to a ligand-binding domain of the
 CC receptor and one is incapable of effectively binding to a ligand-binding
 CC domain of the receptor, and at least one monomer of the dimeric
 CC polypeptide is derived from VEGF, VEGF-C or VEGF-D, where the polypeptide
 CC is capable of binding to the receptor, but incapable of activating the
 CC receptor. The polypeptide of the invention is useful for preparing a
 CC medicament for preventing or treating a disease or condition involving
 CC increased signal transduction from, or an increased activation of a VEGF
 CC type 2 or type 3 receptor e.g. for inhibiting angiogenesis or
 CC lymphangiogenesis. This sequence represents a human single-chain VEGF-D
 CC monomer which can be modified and used in the construction of a VEGF-
 CC based KDR antagonist described in the disclosure of the invention
 XX SQ Sequence 109 AA;
 Query Match 80.0%; Score 80; DB 6; Length 109;
 Best Local Similarity 93.8%; Pred. No. 0.00036;
 Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 OY 2 ASELGKSTNTFKPPC 17
 DB 29 ASELGKSTNTFKPPC 44
 RESULT 13
 ID ABG73750
 XX ID ABG73750 standard; protein; 109 AA.
 AC ABG73750;
 XX DT 01-APR-2003 (first entry)
 XX DE Human VEGF-D monomer unit E57R variant.
 XX KW Human; single-chain; extracellular ligand-binding domain; VEGF;
 KW vascular endothelial growth factor; VEGF type 2 receptor; KDR; Flt-4;
 KW VEGF type 3 receptor; VEGF-C; VEGF-D; signal transduction; angiogenesis;
 KW lymphangiogenesis; mutant; mutein; variant.
 XX OS Homo sapiens.
 OS Synthetic.
 XX PH Key Location/Qualifiers
 FT Misc-difference 10
 FT /note= "This wild-type residue is replaced by Arg or Glu
 FT in the first monomer unit of the VEGF-D dimer if the E57R
 FT mutation has not occurred (see Claim 16) and is

optionally replaced if the E57R mutation has occurred.
 The claim describes this residue as Ser but is shown as
 Ile in the sequence listing"
 Misc-difference 37
 /note= "This wild-type Asn residue is optionally replaced
 by Arg in the second monomer unit of the VEGF-D dimer
 (see Claim 11)"
 Misc-difference 38
 /note= "This wild type Thr residue is optionally replaced
 by Arg or Glu in the second monomer unit of the VEGF-D
 dimer (see Claims 11 and 16)"
 Misc-difference 39
 /note= "This wild type Phe residue is optionally replaced
 by Arg or Glu in the second monomer unit of the VEGF-D
 dimer (see Claims 11 and 16)"
 Misc-difference 40
 /note= "This wild type Phe residue is optionally replaced
 by Arg in the second monomer unit of the VEGF-D dimer
 (see Claim 11)"
 Misc-difference 57
 /label= E57R
 /note= "Wild type Gln is replaced by Arg in the first
 monomer unit of the VEGF-D dimer (see Claim 11) and is
 optionally replaced if the S10R/E mutation has occurred
 (see Claim 16)"
 Misc-difference 76
 /note= "This wild type Ile residue is optionally replaced
 by Arg or Glu in the second monomer unit of the VEGF-D
 dimer (see Claim 16)"
 WO200281520-A2.
 17-OCT-2002.
 08-APR-2002; 2002WO-DK000233.
 06-APR-2001; 2001DK-00000578.
 06-APR-2001; 2001US-0282239P.
 (MAXY-) MAXYGEN HOLDINGS LTD.
 Boesen TP, Halkier T;
 WPI; 2003-058505/05.
 Novel single-chain dimeric polypeptide for inhibiting angiogenesis, binds
 to extracellular ligand-binding domain of vascular endothelial growth
 factor type 2/type 3 receptor but does not activate the receptor.
 Claim 9; Page 66; 71pp; English.
 This invention describes a novel single-chain dimeric polypeptide which
 binds to extracellular ligand-binding domain of vascular endothelial
 growth factor (VEGF) type 2 receptor (KDR) or VEGF type 3 receptor (Flt-
 4). The polypeptide of the invention comprises two receptor-binding sites
 of which one is capable of binding to a ligand-binding domain of the
 receptor and one is incapable of effectively binding to a ligand-binding
 domain of the receptor, and at least one monomer of the dimeric
 polypeptide is derived from VEGF, VEGF-C or VEGF-D, where the polypeptide
 is capable of binding to the receptor, but incapable of activating the
 receptor. The polypeptide of the invention is useful for preparing a
 medicament for preventing or treating a disease or condition involving
 increased signal transduction from, or an increased activation of a VEGF
 type 2 or type 3 receptor e.g. for inhibiting angiogenesis or
 lymphangiogenesis. This sequence represents a human single-chain VEGF-D
 monomer which can be modified and used in the construction of a VEGF-
 based KDR antagonist described in the disclosure of the invention

CC the other VEGF-D derived monomer at least one substitution selected from
 CC the group consisting of T38R, T38E, F39R, F39E, I76R and I76E. NOTE: This
 CC sequence is not represented in the body of the specification but has been
 CC constructed from the wild-type VEGF-D sequence represented in ABB84621

XX SQ Sequence 109 AA;

Query Match 80.0%; Score 80; DB 6; Length 109;
 Best Local Similarity 93.8%; Pred. No. 0.00036;
 Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 2 ASELGKSTNTFCPPC 17
 |||||
 Db 29 ASELGKSTNTFCPPC 44

RESULT 14
 ABG73779
 ID ABG73779 standard; protein; 287 AA.

XX AC

XX AC

DT 03-APR-2003 (first entry)

XX DE Human NVR protein.

XX KW NVR; human; endothelial growth factor; cytostatic; cancer; angiogenesis;
 KW cell proliferation; revascularisation; amputation; vasculogenesis;
 KW transplant; brain; breast; intestine; kidney; lung; ovary; pancreas;
 KW prostate; uterus; gene therapy.

XX OS Homo sapiens.

XX FH Key Location/Qualifiers

FT Misc-difference 281

FT /note= "Encoded by TAA, an in frame stop codon which
 FT interrupts the coding region as shown in Figure 1A-B.
 FT This site is the end of the protein sequence represented
 FT in SEQ ID 1 of the Sequence listing"

FT Region 282..287

FT /note= "Region not represented in SEQ ID 1 of the
 FT Sequence listing"

XX US200215538-A1.

XX 24-OCT-2002.

XX 09-JAN-2002; 2002US-00044622.

XX 23-JAN-1997; 97US-00788812.

XX (INCY-) INCYTE PHARM INC.

XX Bandman O, Goli SK, Murry LE;

XX WPI; 2003-182635/18.

XX N-PSDB; ABQ77105.

XX New endothelial growth factor polypeptide and polynucleotides, useful for
 PT diagnosing, preventing, and treating cancer and other conditions or
 PT diseases involving angiogenesis and cell proliferation.

XX Claim 1; Fig 1A-B; 28pp; English.

XX This invention describes a novel human endothelial growth factor
 CC polypeptide which has cytostatic activity. The polypeptide and its
 CC encoding polynucleotide are useful in the diagnosis, prevention, and
 CC treatment of cancer and other conditions or diseases involving
 CC angiogenesis and cell proliferation. NVR may also be used to promote
 CC revascularisation following traumatic amputation and surgical
 CC reconstruction or added to a tissue culture to promote vasculogenesis in
 CC tissues for autologous or heterologous transplant. Antagonists or
 CC inhibitors of NVR may be used to suppress or prevent angiogenesis and

CC thus prevent the growth and development of cancers such as cancer of the
 CC brain, breast, intestine, kidney, lung, ovary, pancreas, prostate or
 CC uterus. The products of the invention can be used for gene therapy. This
 CC sequence represents the human NVR protein described in the disclosure of
 CC the invention

XX SQ Sequence 287 AA;

Query Match 80.0%; Score 80; DB 6; Length 287;
 Best Local Similarity 93.8%; Pred. No. 0.0009;
 Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 2 ASELGKSTNTFCPPC 17
 |||||
 Db 121 ASELGKSTNTFCPPC 136

RESULT 15

AAW53240

ID AAW53240 standard; protein; 325 AA.

XX AC AAW53240;

XX 03-AUG-1998 (first entry)

XX DE Homo sapiens vascular endothelial growth factor D (VEGF-D).

XX KW vascular endothelial growth factor; VEGF-D; angiogenesis; modification;
 KW acceleration; wound healing; tissue; organ; transplants;
 KW collateral circulation; infarction; arterial stenosis;
 KW coronary artery disease; inhibition; cancer; treatment;
 KW diabetic retinopathy; lung disorders; blood circulation;
 KW gaseous exchange; chronic obstructive airway disease;
 KW intestinal malabsorptive syndrome; biopsy; metastatic risk; detection;
 KW diagnosis; congestive heart failure.

XX OS Homo sapiens.

XX FH Key Location/Qualifiers

FT Region 126..128

FT /note= "potential N-linked glycosylation site"

FT Region 156..158

FT /note= "potential N-linked glycosylation site"

FT Region 258..260

FT /note= "potential N-linked glycosylation site"

XX WO9807832-A1.

XX 26-FEB-1998.

XX 21-AUG-1997; 97WO-US014696.

XX 23-AUG-1996; 96AU-00001825.

XX 23-AUG-1996; 96US-0023751P.

XX 11-NOV-1996; 96AU-00003554.

XX 14-NOV-1996; 96US-0031097P.

XX 05-FEB-1997; 97AU-00004954.

XX 10-FEB-1997; 97US-0038814P.

XX 19-JUN-1997; 97AU-00007435.

XX 01-JUL-1997; 97US-0051426P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX (UYHE-) UNIV HELSINKI LICENSING LTD.

XX PI Achen MG, Wilks AF, Stacker SA, Alitalo K;

XX WPI; 1998-179057/16.

XX N-PSDB; AAV20806.

XX New isolated vascular endothelial growth factor-D - used to develop
 PT products for use in e.g. modifying angiogenesis or treating lung, heart
 PT or intestinal disorders.

PS Claim 16; Page 57-58; 101pp; English.

xx The sequence is that of human breast vascular endothelial growth factor D
CC (VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis in
CC wound healing, tissue or organ transplantation, or to establish
CC collateral circulation in tissue infarction or arterial stenosis, such as
CC coronary artery disease, and inhibition of angiogenesis in the treatment
CC of cancer or of diabetic retinopathy. It can also be used in the lung
CC treatment of lung disorders to improve blood circulation in the lung
CC and/or gaseous exchange between the lungs and the blood stream or to
CC improve blood circulation to the heart and O2 gas permeability in cases
CC of cardiac insufficiency, to improve blood flow and gaseous exchange in
CC chronic obstructive airway disease, or to treat malabsorptive syndromes
CC in the intestinal tract. Quantitation of VEGF-D in cancer biopsy
CC specimens may be useful as an indicator of future metastatic risk.
CC Antagonists can be used for treating e.g. conditions such as congestive
CC heart failure, involving accumulations of fluid in the lung resulting
CC from increases in vascular permeability. The products can also be used
CC for detection and diagnosis

xx SQ Sequence 325 AA;

Query Match 80.0%; Score 80; DB 2; Length 325;
Best Local Similarity 93.8%; Pred. NO. 0.001;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 2 ASELGKSTNTFFKPPC 17
| | | | | | | | | | | | | | | | | | | | | |
Db 92 ASELGKSTNTFFKPPC 107

Search completed: September 5, 2004, 09:55:11
Job time : 55.8081 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 10:00:15 ; Search time 47.7374 Seconds
(without alignments)
112.199 Million cell updates/sec

Title: US-09-761-636A-8
Perfect score: 100
Sequence: 1 CASELGKSTNTFCPPC 17

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1298764 seqs, 315065143 residues

Total number of hits satisfying chosen parameters: 1298764

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:
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2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
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4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep.*
5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep.*
6: /cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep.*
7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep.*
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13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep.*
14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep.*
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18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	100	100.0	17	9	US-09-761-636A-8
2	97	97.0	17	9	US-09-761-636A-27
3	97	97.0	17	9	US-09-761-636A-31
4	93	93.0	17	9	US-09-761-636A-28
5	93	93.0	17	9	US-09-761-636A-30
6	93	93.0	17	9	US-09-761-636A-32
7	89	89.0	17	9	US-09-761-636A-29
8	80	80.0	73	9	US-09-761-636A-3
9	80	80.0	96	9	US-09-761-636A-1
10	80	80.0	109	9	US-09-956-095-3
11	80	80.0	109	9	US-09-219-345A-1
12	80	80.0	109	16	US-10-779-731-1
13	80	80.0	197	12	US-10-352-153-8
14	80	80.0	280	13	US-10-044-622-1
15	80	80.0	325	14	US-10-274-953-3

16	80	80.0	325	14	US-10-161-694-3	Sequence 3, Appli
17	80	80.0	354	9	US-09-956-095-2	Sequence 2, Appli
18	80	80.0	354	9	US-09-219-345A-11	Sequence 11, Appl
19	80	80.0	354	9	US-09-795-006A-119	Sequence 119, App
20	80	80.0	354	10	US-09-375-248-6	Sequence 6, Appli
21	80	80.0	354	12	US-09-765-534B-22	Sequence 22, Appl
22	80	80.0	354	12	US-10-661-740-6	Sequence 6, Appli
23	80	80.0	354	14	US-10-262-538-26	Sequence 26, Appl
24	80	80.0	354	14	US-10-274-953-5	Sequence 5, Appli
25	80	80.0	354	14	US-10-161-694-5	Sequence 5, Appli
26	80	80.0	354	14	US-10-174-930-1	Sequence 1, Appli
27	80	80.0	362	13	US-10-139-876-4	Sequence 4, Appli
28	77	77.0	48	13	US-10-139-876-5	Sequence 5, Appli
29	77	77.0	81	13	US-10-086-623-18	Sequence 18, Appl
30	77	77.0	81	14	US-10-260-539-18	Sequence 6, Appli
31	77	77.0	110	10	US-09-847-524-6	Sequence 6, Appli
32	77	77.0	321	10	US-09-847-524-4	Sequence 4, Appli
33	77	77.0	321	14	US-10-274-953-9	Sequence 9, Appli
34	77	77.0	321	14	US-10-161-694-9	Sequence 2, Appli
35	77	77.0	358	9	US-09-852-209A-13	Sequence 13, Appl
36	77	77.0	358	10	US-09-847-524-2	Sequence 13, Appl
37	77	77.0	358	12	US-10-439-337A-13	Sequence 13, Appl
38	77	77.0	358	12	US-10-303-997B-13	Sequence 13, Appl
39	77	77.0	358	13	US-10-139-876-2	Sequence 2, Appli
40	77	77.0	358	14	US-10-131-600-13	Sequence 13, Appl
41	77	77.0	358	14	US-10-274-953-8	Sequence 8, Appli
42	77	77.0	358	14	US-10-161-694-8	Sequence 5, Appli
43	72	72.0	13	9	US-09-761-636A-5	Sequence 15, Appl
44	69	69.0	13	9	US-09-761-636A-15	Sequence 16, Appl
45	65	65.0	13	9	US-09-761-636A-16	

ALIGNMENTS

RESULT 1
US-09-761-636A-8
; Sequence 8, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: Patent version 3.0
; SEQ ID NO 8
; LENGTH: 17
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-761-636A-8

Query Match 100.0%; Score 100; DB 9; Length 17;
Best Local Similarity 100.0%; Pred. No. 3.2e-08;
Matches 17; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFCPPC 17
Db 1 CASELGKSTNTFCPPC 17

RESULT 2
US-09-761-636A-27
; Sequence 27, Application US/09761636A
; Patent No. US20020065218A1

GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 27
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-27

Query Match 97.0%; Score 97; DB 9; Length 17;
Best Local Similarity 94.1%; Pred. No. 9.2e-08;
Matches 16; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFCCKPPC 17
||:|||||:|||||
Db 1 CATELGKSTNTFCCKPPC 17

RESULT 3
US-09-761-636A-31
; Sequence 31, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 31
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-31

Query Match 97.0%; Score 97; DB 9; Length 17;
Best Local Similarity 94.1%; Pred. No. 9.2e-08;
Matches 16; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFCCKPPC 17
||:|||||:|||||
Db 1 CASELGKSTNTFCCKPPC 17

RESULT 4
US-09-761-636A-28
; Sequence 28, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela

; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 28
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-28

Query Match 93.0%; Score 93; DB 9; Length 17;
Best Local Similarity 88.2%; Pred. No. 3.7e-07;
Matches 15; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFCCKPPC 17
||:|||||:|||||
Db 1 CASELGKSTNTFCCKPPC 17

RESULT 5
US-09-761-636A-30
; Sequence 30, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 30
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-30

Query Match 93.0%; Score 93; DB 9; Length 17;
Best Local Similarity 88.2%; Pred. No. 3.7e-07;
Matches 15; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CASELGKSTNTFCCKPPC 17
||:|||||:|||||
Db 1 CASELGKSTNTFCCKPPC 17

RESULT 6
US-09-761-636A-32
; Sequence 32, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US/09/761,636A
; PRIOR FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293

; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 32
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-32

Query Match 93.0%; Score 93; DB 9; Length 17;
Best Local Similarity 88.2%; Pred. No. 3.7e-07;
Matches 15; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFKPPC 17
|||||:|||||
Db 1 CASELGRSTNSFKPPC 17

RESULT 7

US-09-761-636A-29
; Sequence 29, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 29
; LENGTH: 17
; TYPE: PRT
; ORGANISM: synthetic construct
US-09-761-636A-29

Query Match 89.0%; Score 89; DB 9; Length 17;
Best Local Similarity 82.4%; Pred. No. 1.5e-06;
Matches 14; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 CASELGKSTNTFKPPC 17
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Db 1 CASDVGKSTNTWKPPC 17

RESULT 8

US-09-761-636A-3
; Sequence 3, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0

; SEQ ID NO 3
; LENGTH: 73
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues Vall01-Thr173 of VEGF-D
US-09-761-636A-3

Query Match 80.0%; Score 80; DB 9; Length 73;
Best Local Similarity 93.8%; Pred. No. 0.00014;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFKPPC 17
|||||:|||||
Db 21 ASELGKSTNTFKPPC 36

RESULT 9

US-09-761-636A-1
; Sequence 1, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 96
; TYPE: PRT
; ORGANISM: Homo sapiens
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues of Vall01-Prol96 of VEGF-D
US-09-761-636A-1

Query Match 80.0%; Score 80; DB 9; Length 96;
Best Local Similarity 93.8%; Pred. No. 0.00018;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFKPPC 17
|||||:|||||
Db 21 ASELGKSTNTFKPPC 36

RESULT 10

US-09-956-095-3
; Sequence 3, Application US/09956095
; Patent No. US20020102260A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steven A.
; TITLE OF INVENTION: METHODS FOR TREATING NEOPLASTIC DISEASE CHARACTERIZED BY
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR D EXPRESSION, FOR SCREENING
; TITLE OF INVENTION: FOR NEOPLASTIC DISEASE OR METASTATIC RISK AND FOR MAINTAINING
; TITLE OF INVENTION: VASCULARIZATION OF TISSUE
; FILE REFERENCE: 1064/48666PC
; CURRENT APPLICATION NUMBER: US/09/956,095
; CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 09/796,714
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/234,196
; PRIOR FILING DATE: 2000-09-20

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; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-956-095-3

Query Match      80.0%; Score 80; DB 9; Length 109;
Best Local Similarity 93.8%; Pred. No. 0.00021;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      2 ASELGKSTNTFFCKPPC 17
Db      29 ASELGKSTNTFFCKPPC 44

RESULT 11
US-09-219-345A-1
; Sequence 1, Application US/09219345A
; Patent No. US2002012722A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; TITLE OF INVENTION: EXPRESSION VECTORS AND CELL LINES EXPRESSING VASCULAR
; TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR D, AND METHOD OF TREATING
; TITLE OF INVENTION: MELANOMAS
; FILE REFERENCE: 1064/44385 Marc ACHEN
; CURRENT APPLICATION NUMBER: US/09/219,345A
; PRIOR FILING DATE: 1998-12-23
; PRIOR APPLICATION NUMBER: AU PP 1131
; PRIOR FILING DATE: 1997-12-24
; PRIOR APPLICATION NUMBER: US 60/087,392
; PRIOR FILING DATE: 1998-05-29
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-219-345A-1

Query Match      80.0%; Score 80; DB 9; Length 109;
Best Local Similarity 93.8%; Pred. No. 0.00021;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      2 ASELGKSTNTFFCKPPC 17
Db      29 ASELGKSTNTFFCKPPC 44

RESULT 12
US-10-779-731-1
; Sequence 1, Application US/10779731
; Publication No. US20040141917A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steve A.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/10/779,731
; CURRENT FILING DATE: 2004-02-18
; PRIOR APPLICATION NUMBER: US/10/100,037
; PRIOR FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: 09/469,186
; PRIOR FILING DATE: 1999-12-21
; PRIOR APPLICATION NUMBER: 60/113,254
; PRIOR FILING DATE: 1998-12-21
; PRIOR APPLICATION NUMBER: 60/134,556
; PRIOR FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109

; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-779-731-1

Query Match      80.0%; Score 80; DB 16; Length 109;
Best Local Similarity 93.8%; Pred. No. 0.00021;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      2 ASELGKSTNTFFCKPPC 17
Db      29 ASELGKSTNTFFCKPPC 44

RESULT 13
US-10-352-153-8
; Sequence 8, Application US/10352153
; Publication No. US20030211101A1
; GENERAL INFORMATION:
; APPLICANT: Wise, Lynn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stacker, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS NZ2 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; CURRENT APPLICATION NUMBER: US/10/352,153
; CURRENT FILING DATE: 2003-01-28
; PRIOR APPLICATION NUMBER: US/09/431,888A
; PRIOR FILING DATE: 1999-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,689
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,800
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-352-153-8

Query Match      80.0%; Score 80; DB 12; Length 197;
Best Local Similarity 93.8%; Pred. No. 0.00036;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      2 ASELGKSTNTFFCKPPC 17
Db      45 ASELGKSTNTFFCKPPC 60

RESULT 14
US-10-044-622-1
; Sequence 1, Application US/10044622
; Publication No. US20020155538A1
; GENERAL INFORMATION:
; APPLICANT: Bandman, Olga
; APPLICANT: Goll, Surya K.
; APPLICANT: Murry, Lynn E.
; TITLE OF INVENTION: NOVEL ENDOTHELIAL GROWTH
; TITLE OF INVENTION: FACTOR
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESS: Incyte Pharmaceuticals, Inc.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
```


OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/044,622
FILING DATE: 09-Jan-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/788,812
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0185 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 280 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: LUNGAST01
CLONE: 873352
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-10-044-622-1

Query Match 80.0%; Score 80; DB 13; Length 280;
Best Local Similarity 93.8%; Pred. No. 0.00051;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 2 ASELGKSTNTFFCKPPC 17
Db 121 ASELGKSTNTFFCKPPC 136

RESULT 15
US-10-274-953-3
Sequence 3, Application US/10274953
Publication No. US20030114658A1
GENERAL INFORMATION:
APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Kari ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
CITY: Washington
STATE: DC
COUNTRY: United States of America
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/274,953
FILING DATE: 22-Oct-2002
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/296,275
FILING DATE:
APPLICATION NUMBER: 08/915,795
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983

TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ORIGINAL SOURCE:
TISSUE TYPE: Human Breast
US-10-274-953-3

Query Match 80.0%; Score 80; DB 14; Length 325;
Best Local Similarity 93.8%; Pred. No. 0.00059;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 2 ASELGKSTNTFFCKPPC 17
Db 92 ASELGKSTNTFFCKPPC 107

Search completed: September 5, 2004, 10:29:18
Job time : 47.7374 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:55:30 ; Search time 15,111 Seconds
(without alignments)
58.079 Million cell updates/sec

Title: US-09-761-636A-8

Perfect score: 100

Sequence: 1 CASELCKSTNTFFCKPPC 17

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Searched: 389414 seqs, 51625971 residues

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Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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SUMMARIES

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3	80	80.0	197	4	US-09-431-888-8
4	80	80.0	325	3	US-08-915-795-3
5	80	80.0	354	3	US-08-915-795-5
6	77	77.0	321	3	US-08-915-795-9
7	77	77.0	358	3	US-08-915-795-8
8	59	59.0	415	3	US-08-795-430-11
9	59	59.0	415	4	US-09-355-700-11
10	59	59.0	415	4	US-08-601-132-41
11	59	59.0	415	4	US-08-671-573B-41
12	59	59.0	418	3	US-08-795-430-13
13	59	59.0	418	4	US-09-355-700-13
14	58	58.0	160	4	US-09-355-700-59
15	58	58.0	228	4	US-09-431-888-7
16	58	58.0	350	2	US-08-999-811-4
17	58	58.0	350	2	US-08-924-996-2
18	58	58.0	350	3	US-09-042-105-4
19	58	58.0	350	3	US-08-510-133A-33
20	58	58.0	350	3	US-08-585-895-33
21	58	58.0	419	2	US-08-999-811-2
22	58	58.0	419	3	US-09-042-105-2
23	58	58.0	419	3	US-09-042-105-18
24	58	58.0	419	3	US-08-795-430-8
25	58	58.0	419	3	US-08-510-133A-35
26	58	58.0	419	4	US-09-355-700-8
27	58	58.0	419	4	US-08-601-132-33

28 58 58.0 419 4 US-08-706-054A-3 Sequence 3, Appli
29 58 58.0 419 4 US-09-313-299-3 Sequence 3, Appli
30 58 58.0 419 4 US-08-465-968-2 Sequence 2, Appli
31 58 58.0 419 4 US-08-671-573B-33 Sequence 33, Appli
32 58 58.0 419 5 PCT-US96-09001-2 Sequence 2, Appli
33 49 49.0 419 4 US-09-355-700-58 Sequence 58, Appli
34 47 47.0 120 2 US-08-938-975-2 Sequence 2, Appli
35 47 47.0 120 4 US-09-321-399-2 Sequence 2, Appli
36 47 47.0 120 4 US-09-322-379-2 Sequence 2, Appli
37 46 46.0 128 4 US-09-328-352-4400 Sequence 4400, Ap
38 46 46.0 260 4 US-09-162-021B-4 Sequence 4, Appli
39 45 45.0 20 3 US-09-230-222-28 Sequence 28, Appli
40 45 45.0 21 4 US-09-230-225B-9 Sequence 9, Appli
41 43 43.0 83 3 US-08-875-811-2 Sequence 2, Appli
42 43 43.0 83 4 US-09-071-672-3 Sequence 3, Appli
43 43 43.0 83 4 US-09-986-119-3 Sequence 3, Appli
44 43 43.0 104 1 US-08-283-971-1 Sequence 1, Appli
45 43 43.0 104 1 US-07-921-619-1 Sequence 1, Appli

ALIGNMENTS

RESULT 1

US-09-469-186-1

; Sequence 1, Application US/09469186

; Patent No. 6383484

; GENERAL INFORMATION:

; APPLICANT: ACHEN, Marc G.

; APPLICANT: STACKER, Steve A.

; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF

; FILE REFERENCE: ACHEN et al 1064-44660

; CURRENT APPLICATION NUMBER: US/09/469,186

; CURRENT FILING DATE: 1999-12-21

; EARLIER APPLICATION NUMBER: 60/113,254

; EARLIER FILING DATE: 1998-12-21

; EARLIER APPLICATION NUMBER: 60/134,556

; EARLIER FILING DATE: 1999-05-17

; NUMBER OF SEQ ID NOS: 1

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 1

; LENGTH: 109

; TYPE: PRT

; ORGANISM: Homo sapiens

; US-09-469-186-1

Query Match 80.0%; Score 80; DB 4; Length 109;

Best Local Similarity 93.8%; Pred. No. 5e-05;

Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFFCKPPC 17

Db 29 ASELGKSTNTFFCKPPC 44

RESULT 2

US-09-469-185-1

; Sequence 1, Application US/09469185

; Patent No. 6531185

; GENERAL INFORMATION:

; APPLICANT: ACHEN, Marc G.

; APPLICANT: STACKER, Steve A.

; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF

; FILE REFERENCE: ACHEN et al 1064-44660

; CURRENT APPLICATION NUMBER: US/09/469,185

; CURRENT FILING DATE: 1999-12-21

; EARLIER APPLICATION NUMBER: 60/113,254

; EARLIER FILING DATE: 1998-12-21

; EARLIER APPLICATION NUMBER: 60/134,556

; EARLIER FILING DATE: 1999-05-17

; NUMBER OF SEQ ID NOS: 1

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 1

```

; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-469-185-1

Query Match      80.0%; Score 80; DB 4; Length 109;
Best Local Similarity 93.8%; Pred. No. 5e-05;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY  2 ASELGKSTNTFKPPC 17
Db  29 ASELGKSTNTFKPPC 44

RESULT 3
US-09-431-888-8
; Sequence 8, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lynn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stacker, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N22 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431,888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800
; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-431-888-8

Query Match      80.0%; Score 80; DB 4; Length 197;
Best Local Similarity 93.8%; Pred. No. 9.1e-05;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY  2 ASELGKSTNTFKPPC 17
Db  45 ASELGKSTNTFKPPC 60

RESULT 4
US-08-915-795-3
; Sequence 3, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 354 amino acids
; COMPU

```

TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ORIGINAL SOURCE:
TISSUE TYPE: Human Lung
US-08-915-795-5

Query Match 80.0%; Score 80; DB 3; Length 354;
Best Local Similarity 93.8%; Pred. No. 0.00016;
Matches 15; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFFCKPPC 17
|||||
Db 121 ASELGKSTNTFFCKPPC 136

RESULT 6

US-08-915-795-9
Sequence 9, Application US/08915795
Patent No. 6235713

GENERAL INFORMATION:

APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Kari ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:

ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
CITY: Washington
STATE: DC
COUNTRY: United States of America
ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/915,795
FILING DATE:

CLASSIFICATION: 536

ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:

LENGTH: 321 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

ORIGINAL SOURCE:

TISSUE TYPE: Mouse Lung

US-08-915-795-9

Query Match 77.0%; Score 77; DB 3; Length 321;
Best Local Similarity 87.5%; Pred. No. 0.00042;
Matches 14; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFFCKPPC 17
|||||
Db 121 ASELGKSTNTFFCKPPC 136

RESULT 7

US-08-915-795-8
Sequence 8, Application US/08915795
Patent No. 6235713

GENERAL INFORMATION:

APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Kari ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:

ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
CITY: Washington
STATE: DC
COUNTRY: United States of America
ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/915,795
FILING DATE:

CLASSIFICATION: 536

ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A

INFORMATION FOR SEQ ID NO: 8:

SEQUENCE CHARACTERISTICS:

LENGTH: 358 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

ORIGINAL SOURCE:

TISSUE TYPE: Mouse Lung

US-08-915-795-8

Query Match 77.0%; Score 77; DB 3; Length 358;
Best Local Similarity 87.5%; Pred. No. 0.00047;
Matches 14; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 2 ASELGKSTNTFFCKPPC 17
|||||
Db 126 ASELGKSTNTFFCKPPC 141

RESULT 8

US-08-795-430-11
Sequence 11, Application US/08795430
Patent No. 6130071

GENERAL INFORMATION:

APPLICANT: Alitalo, Kari
APPLICANT: Joukov, Vladimir
TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
TITLE OF INVENTION: Protein and Gene, Mutants Thereof, and Uses Thereof
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402

COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/795,430
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/FI96/00427
; FILING DATE: 01-AUG-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/671,573
; FILING DATE: 28-JUN-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/601,132
; FILING DATE: 14-FEB-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/585,895
; FILING DATE: 12-JAN-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/510,133
; FILING DATE: 01-AUG-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/340,011
; FILING DATE: 14-NOV-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Gass, David A.
; REGISTRATION NUMBER: 38,153
; REFERENCE/DOCKET NUMBER: 28967/33691
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 415 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-795-430-11

```

```

Query Match 59.0%; Score 59; DB 3; Length 415;
Best Local Similarity 71.4%; Pred. No. 0.29;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

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```

Qy 4 ELGKSTNTFFCKPPC 17
Db 139 EFGAATNTFFKPPC 152

```

```

RESULT 9
US-09-355-700-11
; Sequence 11, Application US/09355700
; Patent No. 6361946
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research
; Helsinki University Licensing
; Alitalo, Kari (U.S. only)
; Joukov, Vladimir (U.S. only)
; TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
; Protein and Gene, Mutants Thereof, and Uses Thereof
; NUMBER OF SEQUENCES: 59
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/601,132
; FILING DATE:
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:

```

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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/355,700
; FILING DATE: 05-NO. 6361946-1999
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/795,430
; FILING DATE: 05-FEB-1997
; APPLICATION NUMBER: PCT/FI96/00427
; FILING DATE: 01-AUG-1996
; APPLICATION NUMBER: 08/671,573
; FILING DATE: 28-JUN-1996
; APPLICATION NUMBER: 08/601,132
; FILING DATE: 14-FEB-1996
; APPLICATION NUMBER: 08/585,895
; FILING DATE: 12-JAN-1996
; APPLICATION NUMBER: 08/510,133
; FILING DATE: 01-AUG-1995
; APPLICATION NUMBER: 08/340,011
; FILING DATE: 14-NOV-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Gass, David A.
; REGISTRATION NUMBER: 38,153
; REFERENCE/DOCKET NUMBER: 28967/34140
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 415 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-355-700-11

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```

Query Match 59.0%; Score 59; DB 4; Length 415;
Best Local Similarity 71.4%; Pred. No. 0.29;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

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```

Qy 4 ELGKSTNTFFCKPPC 17
Db 139 EFGAATNTFFKPPC 152

```

```

RESULT 10
US-08-601-132-41
; Sequence 41, Application US/08601132
; Patent No. 6403088
; GENERAL INFORMATION:
; APPLICANT: Alitalo, Kari
; APPLICANT: Joukov, Vladimir
; TITLE OF INVENTION: Receptor Ligand
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/601,132
; FILING DATE:
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:

```

NAME: Gass, David A.
REGISTRATION NUMBER: 38,153
REFERENCE/DOCKET NUMBER: 28113/33118
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 415 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-601-132-41

Query Match 59.0%; Score 59; DB 4; Length 415;
Best Local Similarity 71.4%; Pred. No. 0.29;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 4 ELGKSTNTFKPPC 17
| | : |||| ||||
Db 139 EFGAINTFFKPPC 152

RESULT 11
US-08-671-573B-41
; Sequence 41, Application US/08671573B
; Patent No. 6645933
; GENERAL INFORMATION:
; APPLICANT: Alitalo, Kari
; APPLICANT: Joukov, Vladimir
; TITLE OF INVENTION: Receptor Ligand
; NUMBER OF SEQUENCES: 58
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/671,573B
; FILING DATE: 28-JUN-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/601,132
; FILING DATE: 14-FEB-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/585,895
; FILING DATE: 12-JAN-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/510,133
; FILING DATE: 01-AUG-1995
; NAME: Gass, David A.
; REGISTRATION NUMBER: 38,153
; REFERENCE/DOCKET NUMBER: 28967/33348
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 41:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 415 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-671-573B-41

Query Match 59.0%; Score 59; DB 4; Length 415;
Best Local Similarity 71.4%; Pred. No. 0.29;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
Qy 4 ELGKSTNTFKPPC 17
| | : |||| ||||
Db 139 EFGAINTFFKPPC 152

RESULT 12
US-08-795-430-13
; Sequence 13, Application US/08795430
; Patent No. 6130071
; GENERAL INFORMATION:
; APPLICANT: Alitalo, Kari
; APPLICANT: Joukov, Vladimir
; TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
; TITLE OF INVENTION: Protein and Gene, Mutants Thereof, and Uses Thereof
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/795,430
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/PT96/00427
; FILING DATE: 01-AUG-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/671,573
; FILING DATE: 28-JUN-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/601,132
; FILING DATE: 14-FEB-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/585,895
; FILING DATE: 12-JAN-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/510,133
; FILING DATE: 01-AUG-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/340,011
; FILING DATE: 14-NOV-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Gass, David A.
; REGISTRATION NUMBER: 38,153
; REFERENCE/DOCKET NUMBER: 28967/33691
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 418 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-795-430-13

Query Match 59.0%; Score 59; DB 3; Length 418;
Best Local Similarity 71.4%; Pred. No. 0.29;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELGKSTNTFKPPC 17
| : |||||
Db 142 EFGATNTFFKPPC 155

RESULT 13

US-09-355-700-13
; Sequence 13, Application US/09355700
; Patent No. 6361946

GENERAL INFORMATION:

APPLICANT: Ludwig Institute for Cancer Research

Helsinki University Licensing

Alitalo, Kari (U.S. only)

Joukov, Vladimir (U.S. only)

TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
Protein and Gene, Mutants Thereof, and Uses Thereof

NUMBER OF SEQUENCES: 59

CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

STREET: 6300 Sears Tower, 233 South Wacker Drive

CITY: Chicago

STATE: Illinois

COUNTRY: United States of America

ZIP: 60606-6402

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/355-700

FILING DATE: 05-NOV-1994

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/795,430

FILING DATE: 05-FEB-1997

APPLICATION NUMBER: PCT/FI96/00427

FILING DATE: 01-AUG-1996

APPLICATION NUMBER: 08/671,573

FILING DATE: 28-JUN-1996

APPLICATION NUMBER: 08/601,132

FILING DATE: 14-FEB-1996

APPLICATION NUMBER: 08/585,895

FILING DATE: 12-JAN-1996

APPLICATION NUMBER: 08/510,133

FILING DATE: 01-AUG-1995

APPLICATION NUMBER: 08/340,011

FILING DATE: 14-NOV-1994

ATTORNEY/AGENT INFORMATION:

NAME: Gass, David A.

REGISTRATION NUMBER: 38,153

REFERENCE/DOCKET NUMBER: 28967/34140

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312/474-6300

TELEFAX: 312/474-0448

TELEX: 25-3856

INFORMATION FOR SEQ ID NO: 13:

SEQUENCE CHARACTERISTICS:

LENGTH: 418 amino acids

TYPE: amino acid

STRANDEDNESS: not relevant

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 13:

US-09-355-700-13

Query Match

Best Local Similarity 59.0%; Score 59; DB 4; Length 418;

Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELGKSTNTFKPPC 17

| : |||||

Db 142 EFGATNTFFKPPC 155

RESULT 14

US-09-355-700-59

; Sequence 59, Application US/09355700

; Patent No. 6361946

GENERAL INFORMATION:

APPLICANT: Ludwig Institute for Cancer Research

Helsinki University Licensing

Alitalo, Kari (U.S. only)

Joukov, Vladimir (U.S. only)

TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
Protein and Gene, Mutants Thereof, and Uses Thereof

NUMBER OF SEQUENCES: 59

CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

STREET: 6300 Sears Tower, 233 South Wacker Drive

CITY: Chicago

STATE: Illinois

COUNTRY: United States of America

ZIP: 60606-6402

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/355-700

FILING DATE: 05-NOV-1994

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/795,430

FILING DATE: 05-FEB-1997

APPLICATION NUMBER: PCT/FI96/00427

FILING DATE: 01-AUG-1996

APPLICATION NUMBER: 08/671,573

FILING DATE: 28-JUN-1996

APPLICATION NUMBER: 08/601,132

FILING DATE: 14-FEB-1996

APPLICATION NUMBER: 08/585,895

FILING DATE: 12-JAN-1996

APPLICATION NUMBER: 08/510,133

FILING DATE: 01-AUG-1995

APPLICATION NUMBER: 08/340,011

FILING DATE: 14-NOV-1994

ATTORNEY/AGENT INFORMATION:

NAME: Gass, David A.

REGISTRATION NUMBER: 38,153

REFERENCE/DOCKET NUMBER: 28967/34140

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312/474-6300

TELEFAX: 312/474-0448

TELEX: 25-3856

INFORMATION FOR SEQ ID NO: 59:

SEQUENCE CHARACTERISTICS:

LENGTH: 160 amino acids

TYPE: amino acid

STRANDEDNESS: not relevant

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 59:

US-09-355-700-59

Query Match

Best Local Similarity 58.0%; Score 58; DB 4; Length 160;

Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELGKSTNTFKPPC 17

| : |||||

Db 72 EFGVATNTFFKPPC 85

RESULT 15

US-09-431-888-7
; Sequence 7, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Lorean J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stacker, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS NZ2 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431,888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800
; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 228
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-431-888-7

Query Match 58.0%; Score 58; DB 4; Length 228;
Best Local Similarity 71.4%; Pred. No. 0.23;
Matches 10; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 4 ELGKSTNTCKPPC 17
Db 52 EFGVATNFKKPC 65
| : ||| |||
| : ||| |||

Search completed: September 5, 2004, 10:21:58
Job time : 16.1111 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:47:29 ; Search time 6.90909 Seconds
(without alignments)
125.302 Million cell updates/sec

Title: US-09-761-636A-9
Perfect score: 55
Sequence: 1 CCNEESLIC 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 78.*
1: pir1.*
2: pir2.*
3: pir3.*
4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	45	81.8	120	2 A33787	vascular endotheli
2	45	81.8	133	2 B49530	vascular endotheli
3	45	81.8	146	2 S57956	ovine vascular end
4	45	81.8	190	2 B4080	vascular endotheli
5	42	76.4	190	2 B44881	vascular endotheli
6	42	76.4	190	2 A35987	glioma-derived vas
7	42	76.4	214	2 A44881	vascular endotheli
8	41	74.5	190	2 S52130	vascular endotheli
9	41	74.5	232	2 A41551	vascular endotheli
10	40	72.7	82	2 F36787	hypothetical prote
11	39	70.9	162	2 T01973	hypothetical prote
12	39	70.9	419	2 S69207	neurophysin 2 - bo
13	37	67.3	92	1 NFH02	vasopressin / neur
14	37	67.3	107	1 NVWH2F	vasopressin / neur
15	37	67.3	144	2 A29101	vasopressin / neur
16	37	67.3	147	1 NVSH2	vasopressin / neur
17	37	67.3	164	1 NVH02	vasopressin / neur
18	37	67.3	166	1 NVB02	vasopressin / neur
19	37	67.3	166	1 NVPG2	vasopressin / neur
20	36	65.5	73	2 F85358	hypothetical prote
21	36	65.5	74	2 G85358	gene 5.3 protein -
22	36	65.5	101	2 S07514	placental growth f
23	36	65.5	149	2 A41236	hypothetical prote
24	36	65.5	261	2 D90123	Laci-family transc
25	36	65.5	328	2 AB0021	hypothetical prote
26	36	65.5	818	2 F96586	Ca2+-transporting
27	36	65.5	1115	2 A45761	TRAP-like protein
28	36	65.5	3655	2 T38084	vascular endotheli
29	35	63.6	128	2 I51295	

ALIGNMENTS

RESULT 1

A33787

vascular endothelial growth factor (version 1) - bovine

C;Species: Bos primigenius taurus (cattle)

C;Date: 16-Mar-1990 #sequence_revision 16-Mar-1990 #text_change 05-Nov-1999

C;Accession: A33787

R;Tischer, E.; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Schilling, J.; Lau, K.; Crisp

Biochem. Biophys. Res. Commun. 165, 1198-1206, 1989

A;Title: Vascular endothelial growth factor: a new member of the platelet-derived growth

A;Reference number: A33787; MUID:90121225; PMID:2610687

A;Accession: A33787

A;Status: preliminary

A;Molecule type: mRNA

A;Residues: 1-120 <TIS>

A;Cross-references: GB:M33750; NID:g163810; PIDN:AAA30805.1; PID:g163811

C;Keywords: alternative splicing

Query Match 81.8%; Score 45; DB 2; Length 120;

Best Local Similarity 77.8%; Pred. No. 1.4;

Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9

Db 59 CCNDESLEC 67

RESULT 2

B49530

vascular endothelial growth factor homolog A2R, 14.7K - Orf virus

C;Species: Orf virus

C;Date: 07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change 08-Oct-1999

C;Accession: B49530

R;Lyttle, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.; Robinson, A.J.

J. Virol. 68, 84-92, 1994

A;Title: Homologs of vascular endothelial growth factor are encoded by the poxvirus orf

A;Reference number: A49530; MUID:94076465; PMID:8254780

A;Contents: NZ2

A;Accession: B49530

A;Status: preliminary

A;Molecule type: DNA

A;Residues: 1-133 <LYT>

A;Cross-references: GB:S67520; NID:g456897; PIDN:AAB29220.1; PID:g456899

A;Note: sequence inconsistent with nucleotide translation

A;Note: sequence extracted from NCBI backbone (NCBIN:141420, NCBI:141425)

Query Match 81.8%; Score 45; DB 2; Length 133;

Best Local Similarity 77.8%; Pred. No. 1.5;

Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9

Db 70 CCNDESLEC 78

RESULT 3

S57956

ovine vascular endothelial growth factor - sheep

C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C;Date: 13-Jan-1996 #sequence_revision 01-Mar-1996 #text_change 05-Nov-1999

C;Accession: S57956

R;Redmer, D.A.; Dai, Y.; Li, J.; Jones, S.C.; Moor, R.M.

submitted to the EMBL Data Library, July 1995

A;Reference number: S57956

A;Accession: S57956

A;Status: preliminary

A;Molecule type: mRNA

A;Residues: 1-146 <RED>

A;Cross-references: EMBL:X89506; NID:g899350; PIDN:CAA61677.1; PID:g899351

Query Match 81.8%; Score 45; DB 2; Length 146;

Best Local Similarity 77.8%; Pred. No. 1.7; Indels 1; Gaps 0;

Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9

Db 85 CCNDESLEC 93

RESULT 4

B40080

vascular endothelial growth factor precursor (version 2) - bovine

C;Species: Bos primigenius taurus (cattle)

C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Nov-1999

C;Accession: B40080; B33787; A33255

R;Leung, D.W.; Cachianes, G.; Kuang, W.J.; Goeddel, D.V.; Ferrara, N.

Science 246, 1306-1309, 1989

A;Title: Vascular endothelial growth factor is a secreted angiogenic mitogen.

A;Reference number: A40080; MUID:90069608; PMID:2479986

A;Accession: B40080

A;Molecule type: mRNA

A;Residues: 1-190 <LEU>

A;Cross-references: GB:M32976; NID:g163006; PIDN:AAA30502.1; PID:g163007

R;Tischer, E.; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Schilling, J.; Lau, K.; Crisp

Biochem. Biophys. Res. Commun. 165, 1198-1206, 1989

A;Title: Vascular endothelial growth factor: a new member of the platelet-derived growth

A;Reference number: A33787; MUID:90121225; PMID:2610687

A;Accession: B33787

A;Molecule type: mRNA

A;Residues: 27-190 <TIS>

A;Cross-references: GB:M31836; NID:g163808; PIDN:AAA30804.1; PID:g163809

R;Ferrara, N.; Henzel, W.J.

Biochem. Biophys. Res. Commun. 161, 851-858, 1989

A;Title: Pituitary follicular cells secrete a novel heparin-binding growth factor specif

A;Reference number: A33255; MUID:89286596; PMID:2735925

A;Accession: A33255

A;Molecule type: protein

A;Residues: 27-31 <PER>

C;Keywords: alternative splicing; glycoprotein

F;1-26/Domain: signal sequence #status predicted <SIG>

F;127-190/Product: vascular endothelial growth factor #status predicted <MAT>

F;100/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match

Best Local Similarity 81.8%; Score 45; DB 2; Length 190;

Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9

Db 85 CCNDESLEC 93

RESULT 5

B44881

vascular endothelial growth factor-1 precursor - mouse

C;Species: Mus musculus (house mouse)

C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 05-Nov-1999

C;Accession: B44881; A43351; A61029

R;Breiter, G.; Albrecht, U.; Sterrer, S.; Risau, W.

Development 114, 521-532, 1992

A;Title: Expression of vascular endothelial growth factor during embryonic angiogenesis

A;Reference number: A44881; MUID:92274860; PMID:1592003

A;Accession: B44881

A;Molecule type: mRNA

A;Residues: 1-190 <BRE>

A;Cross-references: GB:S38083; NID:g249858; PIDN:AA822253.1; PID:g249859

A;Experimental source: embryo

A;Note: sequence extracted from NCBI backbone (NCBIN:107622, NCBI:107623)

R;Claffey, K.P.; Wilkison, W.O.; Spiegelman, B.M.

J. Biol. Chem. 267, 16317-16322, 1992

A;Title: Vascular endothelial growth factor. Regulation by cell differentiation and act

A;Reference number: A43351; MUID:92355593; PMID:1644816

A;Accession: A43351

A;Molecule type: mRNA

A;Residues: 1-116, 'ER', 119-190 <CLA>

A;Cross-references: GB:M95200; NID:g202350; PIDN:AAA40547.1; PID:g202351

A;Note: sequence extracted from NCBI backbone (NCBIN:110665, NCBI:110675)

R;Rosenthal, R.A.; Megyesi, J.F.; Henzel, W.J.; Ferrara, N.; Folkman, J.

Growth Factors 4, 53-59, 1990

A;Title: Conditioned medium from mouse sarcoma 180 cells contains vascular endothelial

A;Reference number: A61029; MUID:91197543; PMID:2085441

A;Accession: A61029

A;Molecule type: protein

A;Residues: 27-38 <ROS>

C;Keywords: alternative splicing; angiogenesis; dimer; disulfide bond; glycoprotein; mi

Query Match

Best Local Similarity 76.4%; Score 42; DB 2; Length 190;

Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9

Db 85 CCNDEALEC 93

RESULT 6

A35987

glioma-derived vascular endothelial cell growth factor - rat

C;Species: Rattus norvegicus (Norway rat)

C;Date: 16-Nov-1990 #sequence_revision 16-Nov-1990 #text_change 05-Nov-1999

C;Accession: A35987

R;Conn, G.; Bayne, M.L.; Soderman, D.D.; Kwok, P.W.; Sullivan, K.A.; Palisi, T.M.; Hope

Proc. Natl. Acad. Sci. U.S.A. 87, 2628-2632, 1990

A;Title: Amino acid and cDNA sequences of a vascular endothelial cell mitogen that is

A;Reference number: A35987; MUID:90207249; PMID:2320579

A;Accession: A35987

A;Status: preliminary

A;Molecule type: mRNA

A;Residues: 1-190 <CON>

A;Cross-references: GB:M32167; NID:g204287; PIDN:AAA41211.1; PID:g204288

Query Match

Best Local Similarity 76.4%; Score 42; DB 2; Length 190;

Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9

Db 85 CCNDEALEC 93

RESULT 7

A44881

vascular endothelial growth factor-3 precursor - mouse

N;Contains: vascular endothelial growth factor-2; vascular permeability factor

C;Species: Mus musculus (house mouse)

C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 08-Oct-1999

C;Accession: A44881; C44881; A60932; S52136

R;Breiter, G.; Albrecht, U.; Sterrer, S.; Risau, W.

Development 114, 521-532, 1992

A>Title: Expression of vascular endothelial growth factor during embryonic angiogenesis
A:Reference number: A44881; MUID:92274860; PMID:1592003
A:Accession: A44881
A:Molecule type: mRNA
A:Residues: 1-214

A:Cross-references: GB:S37052; NID:g249856; PIDN:AA822252.1; PID:g249857
A:Experimental source: embryo
A>Note: sequence extracted from NCBI backbone (NCBIN:104677, NCBIP:104678)
A:Accession: C44881
A:Molecule type: mRNA
A:Residues: 1-140,209-214 <BR2>
A:Cross-references: GB:S38100; NID:g249860; PIDN:AA822254.1; PID:g249861
A>Note: sequence extracted from NCBI backbone (NCBIN:107624, NCBIP:107625)
A:Clauss, M.; Gerlach, M.; Gerlach, H.; Brett, J.; Wang, F.; Familletti, P.C.; Pan, Y.C.
J. Exp. Med. 172, 1535-1545, 1990
A>Title: Vascular permeability factor: a tumor-derived polypeptide that induces endothelial
A:Reference number: A60932; MUID:91079755; PMID:2258694
A:Accession: A60932
A:Molecule type: protein
A:Residues: 27-33 <CLA>
R;Sugihara, T.; Kaul, S.C.; Mitsui, Y.; Wadhwa, R.
Biochim. Biophys. Acta 1224, 365-370, 1994
A>Title: Enhanced expression of multiple forms of VEGF is associated with spontaneous in
A:Reference number: S52136; MUID:95101726; PMID:7803491
A:Accession: S52136
A>Status: preliminary
A:Molecule type: protein
A:Residues: 27-46 <SUG>
C:Comment: Homodimers could be demonstrated for recombinant VEGF-2 but not VEGF-3.
A:Keywords: alternative splicing; angiogenesis; disulfide bond; glycoprotein; homodimer;
F;1-26/Domain: signal sequence #status predicted <SIG>
F;1-214/Product: vascular endothelial growth factor-3 #status experimental <MAT>
Query Match 76.4%; Score 42; DB 2; Length 214;
Best Local Similarity 66.7%; Pred. No. 6.9;
Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Qy 1 CCNEESLIC 9
Db 85 CCNDEALEC 93
RESULT 8
S52130
A>Title: Vascular endothelial growth factor - pig
C:Species: Sus scrofa domestica (domestic pig)
C>Date: 14-Jul-1995 #sequence_revision 21-Jul-1995 #text_change 05-Nov-1999
C:Accession: S52130
R;Sharma, H.S.; Tang, Z.H.; Gho, B.C.G.; Verdouw, P.D.
Biochim. Biophys. Acta 1260, 235-238, 1995
A>Title: Nucleotide sequence and expression of the porcine vascular endothelial growth factor
A:Reference number: S52130; MUID:95143284; PMID:7841203
A:Accession: S52130
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-190 <SHA>
A:Cross-references: GB:X81380; NID:gs87559; PIDN:CAA57143.1; PID:gs87560
Query Match 74.5%; Score 41; DB 2; Length 190;
Best Local Similarity 66.7%; Pred. No. 9.2;
Matches 6; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
Qy 1 CCNEESLIC 9
Db 85 CCNDEGLEC 93
RESULT 9
A41551
N:Alternate names: vascular permeability factor
N:Contains: vascular endothelial growth factor 121 (VEGF 121); VEGF 165; VEGF 189; VEGF
C:Species: Homo sapiens (man)

C>Date: 28-Aug-1992 #sequence_revision 28-Aug-1992 #text_change 05-Nov-1999
A:Accession: A41551; B41551; A40454; B40454; C40454; A40079; A40080; JQ1463; JQ
R;Houck, K.A.; Ferrata, N.; Winer, J.; Cachianes, G.; Li, B.; Leung, D.W.
Mol. Endocrinol. 5, 1806-1814, 1991
A>Title: The vascular endothelial growth factor family: identification of a fourth mole
A:Reference number: A41551; MUID:92168017; PMID:1791831
A:Accession: A41551
A:Molecule type: mRNA
A:Residues: 1-232 <HOUI>
A:Cross-references: GB:S85192; NID:g246155; PID:g246156
A:Accession: C41551
A>Status: nucleic acid sequence not shown
A:Molecule type: mRNA
A:Residues: 1-140,'N',183-232 <HOU2>
A:Accession: B41551
A>Status: nucleic acid sequence not shown; not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-141,227-232 <HOU>
R;Tischer, E.; Mitchell, R.; Hartman, T.; Silva, M.; Gospodarowicz, D.; Fiddes, J.C.; Al
J. Biol. Chem. 266, 11947-11954, 1991
A>Title: The human gene for vascular endothelial growth factor. Multiple protein forms
A:Reference number: A40454; MUID:91268072; PMID:1711045
A:Accession: A40454
A:Molecule type: DNA
A:Residues: 1-165,183-232 <TI1>
A:Cross-references: GB:M63971; GB:M63972; GB:M63973; GB:M63974; GB:M63975; GB:M63976; GB
A:Accession: B40454
A:Molecule type: DNA
A:Residues: 1-140,'N',183-232 <TI2>
A:Cross-references: GB:M63971; GB:M63972; GB:M63973; GB:M63974; GB:M63975; GB:M63977; GB
A:Accession: C40454
A:Molecule type: DNA
A:Residues: 1-141,227-232 <TI3>
A:Cross-references: GB:M63971; GB:M63972; GB:M63973; GB:M63974; GB:M63975; GB:M63978
R;Kock, P.J.; Hauser, S.D.; Krivi, G.; Sanzo, K.; Warren, T.; Feder, J.; Connolly, D.T.
Science 246, 1309-1312, 1989
A>Title: Vascular permeability factor, an endothelial cell mitogen related to PDGF.
A:Reference number: A40079; MUID:90069609; PMID:2479987
A:Accession: A40079
A>Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-165,183-232 <KEC>
A:Cross-references: GB:M27281; NID:g340300; PIDN:AAA36807.1; PID:g340301
R;Leung, D.W.; Cachianes, G.; Kuang, W.J.; Goeddel, D.V.; Ferrara, N.
Science 246, 1306-1309, 1989
A>Title: Vascular endothelial growth factor is a secreted angiogenic mitogen.
A:Reference number: A40080; MUID:90069608; PMID:2479986
A:Accession: A40080
A>Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-140,'N',183-232 <LEU>
A:Cross-references: GB:M32977; NID:gi81970; PIDN:AAA35789.1; PID:gi81971
R;Weindel, K.; Marne, D.; Weich, H.A.
Biochem. Biophys. Res. Commun. 183, 1167-1174, 1992
A>Title: AIDS-associated Kaposi's sarcoma cells in culture express vascular endothelial
A:Reference number: JQ1463; MUID:92231879; PMID:1567395
A:Accession: JQ1463
A:Molecule type: mRNA
A:Residues: 1-140,'N',183-232 <WEI>
A:Cross-references: EMBL:X62568; NID:g37658; PIDN:CAA44447.1; PID:g37659
A:Experimental source: AIDS-Kaposi's sarcoma cell
A:Accession: JQ1464
A:Molecule type: mRNA
A:Residues: 1-140,'N',227-232 <WE2>
A:Experimental source: AIDS-Kaposi's sarcoma cell
R;Connolly, D.T.; Olander, J.V.; Heuvelman, D.; Nelson, R.; Monsell, R.; Siegel, N.; Hay
J. Biol. Chem. 264, 20017-20024, 1989
A>Title: Human vascular permeability factor. Isolation from U937 cells.
A:Reference number: A34492; MUID:90062112; PMID:2584205
A:Accession: A34492
A:Molecule type: protein
A:Residues: 27-36,43-49,'R';72-76,'Q',78-81;59-71 <CON>
C:Comment: The most common of several alternatively spliced forms is VEGF 165.

C;Genetics:
 A;Gene: GDB:VEGF
 A;Cross-references: GDB:132244; OMIM:192240
 A;Map position: 6p21-6p12
 C;Function:
 A;Description: promotes fluid and protein leakage from blood vessels
 C;Keywords: alternative splicing; angiogenesis; dimer; disulfide bond; extracellular protein
 F;1-232/Product: vascular endothelial growth factor 206 precursor #status predicted <V20
 F;1-165-183-232/Product: vascular endothelial growth factor 189 precursor #status predicted
 F;1-141-227-232/Product: vascular endothelial growth factor 121 precursor #status predicted
 F;1-26/Domain: signal sequence #status predicted <SIG>
 F;101/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 74.5%; Score 41; DB 2; Length 232;
 Best Local Similarity 66.7%; Pred. No. 11;
 Matches 6; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
 |||:|:|
 Db 86 CCNDEGLEC 94

RESULT 10
 E36787
 hypothetical protein ORF13 - ictalurid herpesvirus 1 (strain auburn 1)
 C;Species: ictalurid herpesvirus 1
 A;Note: host Ictalurus punctatus (channel catfish)
 C;Date: 17-Aug-1992 #sequence_revision 17-Aug-1992 #text_change 08-Oct-1999
 C;Accession: E36787
 R;Davison, A.J.
 submitted to GenBank, January 1992
 A;Description: Channel catfish virus: a new type of herpesvirus.
 A;Reference number: A36804
 A;Accession: E36787
 A;Molecule type: DNA
 A;Residues: 1-82 <DAV>
 A;Cross-references: GB:M75136; NID:g331209; PIDN:AAA88116.1; PID:g331223
 R;Davison, A.J.
 Virology 186, 9-14, 1992
 A;Title: Channel catfish virus: a new type of herpesvirus.
 A;Reference number: A39447; MUID:92087490; PMID:1727613
 A;Contents: annotation
 A;Note: neither protein nor nucleic acid sequence is given
 C;Genetics:
 A;Gene: 13
 C;Keywords: DNA binding; zinc finger

Query Match 72.7%; Score 40; DB 2; Length 82;
 Best Local Similarity 66.7%; Pred. No. 7.2;
 Matches 6; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
 |||:|:|
 Db 11 CCNPMSLIC 19

RESULT 11
 T01973
 hypothetical protein T9A4.2 - Arabidopsis thaliana
 N;Alternate names: hypothetical protein F24G24.40
 C;Species: Arabidopsis thaliana (mouse-ear cress)
 C;Date: 26-Feb-1999 #sequence_revision 26-Feb-1999 #text_change 14-May-1999
 C;Accession: T01973; T04039
 R;Zidanic, M.; McQuerry, Y.; Smith, A.
 submitted to the EMBL Data Library, October 1998
 A;Description: The sequence of A. thaliana T9A4.
 A;Reference number: Z14478
 A;Accession: T01973
 A;Status: translated from GB/EMBL/DBJ
 A;Molecule type: DNA
 A;Residues: 1-162 <ZID>
 A;Cross-references: EMBL:AF096373; NID:g3695400; PID:g3695405
 A;Experimental source: cultivar Columbia

R;Bevan, M.; Murphy, G.; Ridley, P.; Hudson, S.; Bancroft, I.; Mewes, H.W.; Mayer, K.F.
 submitted to the Protein Sequence Database, March 1999
 A;Reference number: Z15184
 A;Accession: T04039
 A;Molecule type: DNA
 A;Residues: 1-162 <BEV>
 A;Cross-references: EMBL:AL049488
 A;Experimental source: cultivar Columbia; BAC clone F24G24
 C;Genetics:
 A;Map position: 4
 A;Introns: 67/3
 A;Note: T9A4.2; F24G24.40

Query Match 70.9%; Score 39; DB 2; Length 162;
 Best Local Similarity 44.4%; Pred. No. 18;
 Matches 4; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
 |||:|:|
 Db 17 CCSDEAVLC 25

RESULT 12

S69207
 vascular endothelial growth factor C precursor - human
 N;Alternate names: FLT4 ligand DHM
 C;Species: Homo sapiens (man)
 C;Date: 27-Apr-1996 #sequence_revision 01-Nov-1996 #text_change 08-Oct-1999
 C;Accession: S69207; S61795; S71443; S69208; G02659
 R;Joukov, V.; Pajusola, K.; Kaipainen, A.; Chilov, D.; Lahtinen, I.; Kukk, E.; Saksela, E.MBO J. 15, 1751, 1996
 A;Title: Corrigendum: A novel vascular endothelial growth factor, VEGF-C, is a ligand f
 A;Reference number: S69207; MUID:96203094; PMID:8612600
 A;Accession: S69207
 A;Status: nucleic acid sequence not shown
 A;Molecule type: mRNA
 A;Residues: 1-419 <JOU>
 A;Cross-references: EMBL:X94216; NID:g1177488; PIDN:CAA63907.1; PID:g221096; PID:g11820
 A;Note: the nucleotide sequence was submitted to the EMBL Data Library, December 1995
 A;Note: only a part of the translation is shown
 A;Note: this is a revision to the sequence from reference S61795
 R;Joukov, V.; Pajusola, K.; Kaipainen, A.; Chilov, D.; Lahtinen, I.; Kukk, E.; Saksela, E.MBO J. 15, 290-298, 1996
 A;Title: A novel vascular endothelial growth factor, VEGF-C, is a ligand for the Flt4
 A;Reference number: S61795; MUID:96178224; PMID:8617204
 A;Accession: S61795
 A;Status: nucleic acid sequence not shown; not compared with conceptual translation

A;Molecule type: mRNA
 A;Residues: 70-419 <JOU1>
 A;Note: this sequence has been revised in reference S69207
 A;Accession: S71443

A;Molecule type: protein
 A;Residues: 'X',104-120 <JOU2>
 R;Lee, J.; Gray, A.; Yuan, J.; Luoh, S.M.; Avraham, H.; Wood, W.I.
 submitted to the EMBL Data Library, December 1995
 A;Description: Vascular endothelial growth factor related protein (VRP): A ligand and s
 A;Reference number: S69208
 A;Accession: S69208
 A;Molecule type: mRNA
 A;Residues: 1-419 <LEE>
 A;Cross-references: EMBL:U43142; NID:g1150988; PIDN:AAA85214.1; PID:g1150989
 R;Morris, J.C.
 submitted to the EMBL Data Library, May 1996

A;Reference number: H01557
 A;Accession: G02659
 A;Status: preliminary; translated from GB/EMBL/DBJ
 A;Molecule type: mRNA
 A;Residues: 1-419 <MOR>
 A;Cross-references: EMBL:U58111; NID:g1373426; PIDN:AAB02909.1; PID:g1373427
 C;Genetics:
 A;Gene: GDB:VEGFC; VRP
 A;Cross-references: GDB:3890883; OMIM:601528
 F;1-12/Domain: signal sequence #status predicted <SIG>

F;13-102/Domain: propeptide #status predicted <PRO>
F;103-419/Product: vascular endothelial growth factor C #status experimental <VAT>

Query Match 70.9%; Score 39; DB 2; Length 419;
Best Local Similarity 66.7%; Pred. No. 36;
Matches 6; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
|||
DB 165 CCNSELQOC 173

RESULT 13

NFH02

neurophysin 2 - horse (tentative sequence) (fragment)

C;Species: Equus caballus (domestic horse)

C;Date: 22-May-1981 #sequence_revision 22-May-1981 #text_change 31-Mar-2000

C;Accession: A01444

R;Chauvet, M.T.; Codogno, P.; Chauvet, J.; Acher, R.

FEBS Lett. 80, 374-376, 1977

A;Title: Phylogeny of the neurophysins: complete amino acid sequence of horse MSEL-neuro

A;Reference number: A01444; MUID:77246829; PMID:891988

A;Accession: A01444

A;Molecule type: protein

A;Residues: 1-92 <CHA>

C;Superfamily: oxytocin-neurophysin

C;Keywords: hormone; hypothalamus

F;7-51,10-24,18-41,25-31,58-70,64-82,71-76/Disulfide bonds: #status predicted

Query Match

67.3%; Score 37; DB 1; Length 92;

Best Local Similarity 62.5%; Pred. No. 24;

Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLI 8

|||

DB 70 CCNDESCV 77

RESULT 14

NVWH2F

neurophysin / neurophysin 2 precursor - finback whale (tentative sequence) (fragment)

N;Contains: Arg-vasopressin; neurophysin 2

C;Species: Balaenoptera physalus (finback whale, common rorqual)

C;Date: 18-Aug-1982 #sequence_revision 05-Jan-1996 #text_change 31-Mar-2000

C;Accession: B93147; A91447; A01446

R;Acher, R.; Chauvet, J.; Chauvet, M.T.

Nature 201, 191-192, 1964

A;Title: Isolation of finback whale oxytocin and vasopressin.

A;Reference number: A93147

A;Accession: B93147

A;Molecule type: protein

A;Residues: 1-9 <ACH>

R;Chauvet, M.T.; Codogno, P.; Chauvet, J.; Acher, R.

FEBS Lett. 88, 91-93, 1978

A;Title: Phylogeny of neurophysins. Complete amino acid sequence of whale (Balaenoptera

A;Reference number: A91447; MUID:78148313; PMID:639997

A;Accession: A91447

A;Molecule type: protein

A;Residues: 13-107 <CHA>

A;Note: some residues may have been positioned only by homology with other neurophysins

C;Comment: Glycine is placed at 10 and X's at 11 and 12 by homology with the complete se

C;Function:

A;Description: vasopressin is a hypothalamic peptide hormone that is an antidiuretic and,

ein for vasopressin

C;Superfamily: oxytocin-neurophysin

C;Keywords: amidated carboxyl end; glycoprotein; hormone; hypothalamus

F;1-9/Product: Arg-vasopressin #status experimental <VAS>

F;13-107/Product: neurophysin 2 #status experimental <NF2>

F;1-6/Disulfide bonds: #status experimental

F;9/Modified site: amidated carboxyl end (Gly) (amide in mature form from following glyc

F;22-66,25-39,33-56,40-46,73-85,79-97,86-91/Disulfide bonds: #status predicted

Query Match

67.3%; Score 37; DB 1; Length 107;

Best Local Similarity 62.5%; Pred. No. 27;
Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLI 8
|||
DB 85 CCNDESCV 92

RESULT 15

A29101

vasopressin / neurophysin 2 precursor - guinea pig

N;Alternate names: copeptin

N;Contains: Arg-vasopressin; neurophysin 2; pituitary glycopeptide

C;Species: Cavia porcellus (guinea pig)

C;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 06-Sep-1996

C;Accession: A29101; S00009; JS0300; A23630

R;Chauvet, M.T.; Rouille, Y.; Chauvet, J.; Acher, R.

FEBS Lett. 210, 40-44, 1987

A;Title: Guinea pig neurohypophysial hormones. Peculiar processing of the three-domain

A;Reference number: A29101; MUID:87105929; PMID:3803579

A;Accession: A29101

A;Molecule type: protein

A;Residues: 1-144 <CHA>

R;Chauvet, J.; Chauvet, M.T.; Acher, R.

FEBS Lett. 217, 180-183, 1987

A;Title: Conformation limited proteolysis in the common neurophysin-copeptin precursor ;

A;Reference number: S00009; MUID:87247214; PMID:3595848

A;Accession: S00009

A;Molecule type: protein

A;Residues: 13-144 <CH4>

R;Chauvet, M.T.; Chauvet, J.; Acher, R.

Int. J. Pept. Protein Res. 30, 676-682, 1987

A;Title: Guinea pig MSEL-neurophysin. Sequence comparison of eight mammalian MSEL-neuro

A;Reference number: JS0300; MUID:88138574; PMID:3436704

A;Accession: JS0300

A;Molecule type: protein

A;Residues: 13-105 <CH2>

A;Note: 93-Ala was also found

R;Chauvet, M.T.; Chauvet, J.; Acher, R.

FEBS Lett. 197, 169-172, 1986

A;Title: Guinea pig copeptin. The glycopeptide domain of the vasopressin precursor.

A;Reference number: A23630; MUID:86136563; PMID:3081370

A;Accession: A23630

A;Molecule type: protein

A;Residues: 107-144 <CH3>

C;Superfamily: oxytocin-neurophysin

C;Keywords: amidated carboxyl end; glycoprotein; hormone; hypothalamus

F;1-9/Product: Arg-vasopressin #status experimental <RVP>

F;13-105/Product: neurophysin 2 #status experimental <NF2>

F;107-144/Product: pituitary glycopeptide #status experimental <GCP>

F;1-6/Disulfide bonds: #status experimental

F;9/Modified site: amidated carboxyl end (Gly) (amide in mature form from following glyc

F;22-66,25-39,33-56,40-46,73-85,79-97,86-91/Disulfide bonds: #status predicted

F;112/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match

67.3%; Score 37; DB 2; Length 144;

Best Local Similarity 62.5%; Pred. No. 34;

Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLI 8

|||

DB 85 CCNDESCV 92

Search completed: September 5, 2004, 10:01:19

Job time : 7.90909 secs

This Page Blank (uspto)

Blank (uspto)

GenCore version 5.1.6

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:38:39 ; Search time 4.09091 Seconds
(without alignments)
114.554 Million cell updates/sec

Title: US-09-761-636A-9

Perfect score: 55

Sequence: 1 CCNEESLIC 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt_42:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	55	100.0	354	1	VEGD HUMAN
2	49	89.1	326	1	VEGD_RAT
3	45	81.8	133	1	VEGH ORFN2
4	45	81.8	146	1	VEGA SHEEP
5	45	81.8	164	1	VEGA_CAVPO
6	45	81.8	190	1	VEGA_BOVIN
7	45	81.8	358	1	VEGD_MOUSE
8	42	76.4	214	1	VEGA_MOUSE
9	42	76.4	214	1	VEGA_RAT
10	41	74.5	190	1	VEGA_HORSE
11	41	74.5	190	1	VEGA_PIG
12	41	74.5	214	1	VEGA_CANFA
13	41	74.5	232	1	VEGA_HUMAN
14	40	72.7	82	1	VG13 HSV11
15	39	70.9	126	1	VEGC_RAT
16	39	70.9	415	1	VEGC_MOUSE
17	39	70.9	419	1	VEGC_HUMAN
18	38	69.1	15	1	CX3A CONQU
19	38	69.1	149	1	PLGF_BOVIN
20	37	67.3	92	1	NEU2_HORSE
21	37	67.3	107	1	NEU2_BALPH
22	37	67.3	144	1	NEU2_CAVPO
23	37	67.3	147	1	NEU2_SHEEP
24	37	67.3	164	1	NEU2_HUMAN
25	37	67.3	166	1	NEU2_BOVIN
26	37	67.3	166	1	NEU2_PIG
27	37	67.3	190	1	VEGA_MESAU
28	36	65.5	73	1	RC23 ARATH
29	36	65.5	74	1	RC24 ARATH
30	36	65.5	101	1	Y53 BPT3
31	36	65.5	221	1	PLGF_HUMAN
32	36	65.5	3655	1	YAMB_SCHPO
33	35	63.6	35	1	TXH4_SELHA

34	35	63.6	148	1	VEGH_ORFN7
35	35	63.6	158	1	PLGF_MOUSE
36	35	63.6	158	1	PLGF_RAT
37	35	63.6	216	1	VEGA_CHICK
38	35	63.6	495	1	FASC_STRPU
39	35	63.6	1024	1	S26L_HUMAN
40	35	63.6	1058	1	UBA1_HUMAN
41	35	63.6	1058	1	UBA1_MOUSE
42	35	63.6	1058	1	UBA1_RABIT
43	35	63.6	4427	1	PKSL_BACSU
44	34.5	62.7	1778	1	NI89_SCHPO
45	34	61.8	35	1	TXH4_SELHU

P52585	orf virus (
P49764	mus musculus
Q63434	rattus norv
P52582	gallus gall
Q05634	strongyloce
Q9pyh1	homo sapien
P22314	homo sapien
Q02053	mus musculus
Q29504	oryctolagus
Q05470	bacillus su
Q9utk4	schizosacch
P83303	selenocosmi

ALIGNMENTS

RESULT 1					
VEGD_HUMAN	STANDARD;	PRT;	354	AA.	
AC	O43915;				
DT	28-FEB-2003 (Rel. 41, Last sequence update)				
DT	10-OCT-2003 (Rel. 42, Last annotation update)				
DE	Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIFG).				
GN	FIFG OR VEGFD.				
OS	Homo sapiens (Human).				
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;				
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.				
OX	NCBI_TaxID=9606;				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RC	TISSUE=Lung;				
RX	MEDLINE=97349118; PubMed=9205122;				
RA	Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;				
RT	"Molecular cloning of a novel vascular endothelial growth factor,				
RT	VEGF-D.";				
RL	Genomics 42:483-488(1997).				
RN	[2]				
RP	SEQUENCE FROM N.A.				
RC	TISSUE=Lung;				
RX	MEDLINE=98140120; PubMed=9479493;				
RA	Rocchigiani M., Lestingi M., Luddi A., Orlandini M., Franco B.,				
RT	Rossi E., Ballabio A., Zuffardi O., Oliviero S.;				
RT	"Human FIFG: cloning, gene structure, and mapping to chromosome Xp22.1				
RT	between the FIGA and the GRPR genes.";				
RL	Genomics 47:207-216(1998).				
RN	[3]				
RP	SEQUENCE FROM N.A.				
RX	MEDLINE=98118549; PubMed=9435229;				
RA	Achen M.G., Jeltsch M., Kukk E., Maekinen T., Vitali A., Wilks A.F.,				
RA	Alitalo K., Stacker S.A.;				
RT	"Vascular endothelial growth factor D (VEGF-D) is a ligand for the				
RT	tyrosine kinases VEGF receptor 2 (Flk1) and VEGF receptor 3 (Flt4).";				
RL	Proc. Natl. Acad. Sci. U.S.A. 95:548-553(1998).				
RN	[4]				
RP	SEQUENCE FROM N.A.				
RC	TISSUE=Lung;				
RX	MEDLINE=22388257; PubMed=12477932;				
RA	Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,				
RA	Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,				
RA	Altshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,				
RA	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh P.,				
RA	Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,				
RA	Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Prange T.E.,				
RA	Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Schaefer C.,				
RA	Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,				
RA	Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,				
RA	Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,				
RA	Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,				
RA	Fahey J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,				
RA	Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,				

RA	Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallus D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16989-16903(2002).	FT	PROPEP	22	88	OR 99 (IN A MINOR FORM). VASCULAR ENDOTHELIAL GROWTH FACTOR D.
RA		FT	CHAIN	89	205	
RA		FT	PROPEP	354	354	
RA		FT	DOMAIN	202	316	4 X 16 AA REPEATS OF C-X(10)-C-X-C-X(1,3)-C.
RT		FT	REPEAT	222	237	1 (APPROXIMATE).
RT		FT	REPEAT	258	273	2.
RT		FT	REPEAT	277	293	3.
RT		FT	REPEAT	301	318	4.
RT		FT	DISULFID	111	153	BY SIMILARITY.
RT		FT	DISULFID	142	189	BY SIMILARITY.
RT		FT	DISULFID	146	191	BY SIMILARITY.
RT		FT	DISULFID	136	136	INTERCHAIN (BY SIMILARITY).
RT		FT	DISULFID	145	145	INTERCHAIN (BY SIMILARITY).
RT		FT	CARBOHYD	155	155	N-LINKED (GLCNAC. . .) (POTENTIAL).
RT		FT	CARBOHYD	185	185	N-LINKED (GLCNAC. . .) (POTENTIAL).
RT		FT	CARBOHYD	287	287	N-LINKED (GLCNAC. . .) (POTENTIAL).
SQ	SEQUENCE 354 AA; 2048D769D735173E CRC64;					
	Query Match 100.0%; Score 55; DB 1; Length 354;					
	Best Local Similarity 100.0%; Pred. No. 0.012;					
	Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;					
Qy	1 CCNEESLIC 9					
Db	145 CCNEESLIC 153					
	RESULT 2					
VEGD RAT	VEGD RAT STANDARD; PRT; 326 AA.					
ID	O35251;					
AC	28-FEB-2003 (Rel. 41, Created)					
DT	28-FEB-2003 (Rel. 41, Last sequence update)					
DT	10-OCT-2003 (Rel. 42, Last annotation update)					
DE	Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF).					
DE	FIGF OR VEGFD.					
GN	Rattus norvegicus (Rat).					
OS	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.					
OC	NCBI_TaxID=10116;					
OX	[1]					
RP	SEQUENCE FROM N.A.					
RC	STRAIN=Sprague-Dawley;					
RA	Yamada Y., Hirata Y., Nezu J., Shimane M.; Submitted (JUL-1997) to the EMBL/GenBank/DBJ databases.					
RL	FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-3 (Flt4) receptor (By similarity).					
CC	!- SUBUNIT: Homodimer; non-covalent and antiparallel (By similarity).					
CC	!- SUBCELLULAR LOCATION: Secreted (By similarity).					
CC	!- PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions (By similarity).					
CC	!- SIMILARITY: Belongs to the PDGFR/VEGF growth factor family.					
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).					
CC	EMBL; D89630; BAA24264.1; -					
DR	EMBL; Y12863; CAA73370.1; -					
DR	EMBL; Y12864; CAA73371.1; -					
DR	EMBL; Y12865; CAA73371.1; JOINED.					
DR	EMBL; Y12866; CAA73371.1; JOINED.					
DR	EMBL; Y12867; CAA73371.1; JOINED.					
DR	EMBL; Y12868; CAA73371.1; JOINED.					
DR	EMBL; Y12869; CAA73371.1; JOINED.					
DR	EMBL; Y12870; CAA73371.1; JOINED.					
DR	EMBL; AJ000185; CAA03942.1; -					
DR	EMBL; BC027948; RAH27948.1; -					
DR	HSSP; FL5692; IVPF.					
DR	Genew; HGNC:3708; FIGF.					
DR	MIM; 300091; -					
DR	GO; GO:0005615; C:extracellular space; TAS.					
DR	GO; GO:0005161; F:platelet-derived growth factor receptor bin. . .; TAS.					
DR	GO; GO:0005102; F:receptor binding; TAS.					
DR	GO; GO:0008284; P:positive regulation of cell proliferation; TAS.					
DR	InterPro; IPR004153; CXKC_repeat.					
DR	Pfam; PF00341; PDGF; 1.					
DR	ProDom; PD001629; PD_growth_factor; 1.					
DR	SMART; SM00141; PDGF; 1.					
DR	PROSITE; PS00249; PDGF_1; 1.					
DR	PROSITE; PS02078; PDGF_2; 1.					
KW	Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;					
KW	Cleavage on pair of basic residues; Multigene family.					
PT	POTENTIAL.					

```

DR HSP: P15692; LVPP.
DR InterPro: IPR004153; CXCC repeat.
DR InterPro: IPR000072; PD_growth_factor.
DR Pfam: PF03128; CXCC; 1.
DR Pfam: PF00341; PDGF; 1.
DR ProDom: PD001629; PD_growth_factor; 1.
DR SMART: SM00141; PDGF; 1.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS0278; PDGF_2; 1.
DR Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
KW Cleavage on pair of basic residues; Multigene family.
FT SIGNAL 1 21
FT PROPEP 22 93
FT CHAIN 94 210
FT PROPEP 211 326
FT DOMAIN 227 317
FT REPEAT 227 242
FT REPEAT 263 278
FT REPEAT 282 298
FT REPEAT 306 317
FT DISULFID 116 158
FT DISULFID 147 194
FT DISULFID 151 196
FT DISULFID 141 141
FT DISULFID 150 150
FT CARBOHYD 160 160
FT CARBOHYD 190 190
FT CARBOHYD 292 292
SQ SEQUENCE 326 AA; 37112 MW; 1261AFA373596C00 CRC64;

Query Match 89.1%; Score 49; DB 1; Length 326;
Best Local Similarity 77.8%; Pred. No. 0.12;
Matches 7; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 150 CCNEESVMC 158

RESULT 3
VEGH ORFN2
ID VEGH ORFN2 STANDARD; PRT; 133 AA.
AC P52584;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor homolog precursor.
GN A2R.
OS Orf virus (strain NZ2) (OV NZ-2).
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=10259;
RN [1]_TaxID=10259;
RP SEQUENCE FROM N.A.
RX MEDLINE=94076465; PubMed=8254780;
RA Lytle D.J., Fraser K.M., Fleming S.B., Mercer A.A., Robinson A.J.;
RA "Homologs of vascular endothelial growth factor are encoded by the
RT poxvirus orf virus.";
RL J. Virol. 68:84-92(1994).
CC -!- FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.
CC -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
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CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL; S67520; AAB29220.2; -

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DR HSP: P15692; LVPP.
DR InterPro: IPR002400; GE_cysknot.
DR InterPro: IPR000072; PD_growth_factor.
DR Pfam: PF00341; PDGF; 1.
DR PRINTS: PR00438; GFCYSKNOT.
DR ProDom: PD001629; PD_growth_factor; 1.
DR SMART: SM00141; PDGF; 1.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS0278; PDGF_2; 1.
DR Mitogen; Growth factor; Glycoprotein; Signal.
FT SIGNAL 1 20
FT CHAIN 21 133
FT DISULFID 36 78
FT DISULFID 67 112
FT DISULFID 71 114
FT DISULFID 61 61
FT DISULFID 70 70
FT CARBOHYD 85 85
SQ SEQUENCE 133 AA; 14715 MW; 917C0F6883030C39 CRC64;

Query Match 81.8%; Score 45; DB 1; Length 133;
Best Local Similarity 77.8%; Pred. No. 0.26;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 70 CCNDESLEC 78

RESULT 4
VEGA SHEEP
ID VEGA SHEEP STANDARD; PRT; 146 AA.
AC P50412;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
DE permeability factor) (VPF).
GN VEGF OR VEGFA.
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=97117958; PubMed=8958842;
RA Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,
RA Reynolds L.P., Moor R.M.;
RA "Characterization and expression of vascular endothelial growth
RT factor (VEGF) in the ovine corpus luteum.";
RL J. Reprod. Fertil. 108:157-165(1996).
CC -!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and
CC endothelial cell growth. It induces endothelial cell
CC proliferation, promotes cell migration, inhibits apoptosis, and
CC induces permeabilization of blood vessels. It binds to the
CC VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
CC heparin (By similarity).
CC -!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
CC with PlGF (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
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CC -----
CC EMBL; X89506; CAA61677.1; -

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DR InterPro; IPR002400; GF_CYSKINOC.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam: PF00341; PDGF; 1.


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DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
KW Angiogenesis; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
KW Cleavage on pair of basic residues; Multigene family.
FT SIGNAL 1 21
FT PROPEP 22 93
FT CHAIN 94 210
FT PROPEP 211 358
FT DOMAIN 227 323
FT REPEAT 227 242
FT REPEAT 263 278
FT REPEAT 282 298
FT REPEAT 306 323
FT DISULFID 116 158
FT DISULFID 147 194
FT DISULFID 151 196
FT DISULFID 141 141
FT DISULFID 150 150
FT CARBOHYD 160 160
FT CARBOHYD 190 190
FT CARBOHYD 292 292
SQ SEQUENCE 358 AA; 40908 MW; 6636B17FBF07037C CRC64;

Query Match 81.8%; Score 45; DB 1; Length 358;
Best Local Similarity 66.7%; Pred. No. 0.69; 1; Indels 0; Gaps 0;
Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
DB 150 CCNEGVWC 158
|||||:::

RESULT 8
VEGA_MOUSE STANDARD; PRT; 214 AA.
AC Q00731;
DT 01-APR-1993 (Rel. 25, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
DE permeability factor) (VFP).
GN VEGF OR VEGFA.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORMS VEGF-1; VEGF-2 AND VEGF-3).
RX MEDLINE=92274860; PubMed=1592003;
RA Breier G., Albrecht U., Storrer S., Risau W.;
RT "Expression of vascular endothelial growth factor during embryonic
RT angiogenesis and endothelial cell differentiation.";
RL Development 114:521-532(1992).
RN [2]
RP SEQUENCE FROM N.A. (ISOFORM VEGF-1).
RX MEDLINE=92355593; PubMed=164816;
RA Claffey K.P., Wilkison W.O., Spiegelman B.M.;
RT "Vascular endothelial growth factor. Regulation by cell
RT differentiation and activated second messenger pathways.";
RL J. Biol. Chem. 267:16317-16322(1992).
RN [3]
RP SEQUENCE OF 1-3 FROM N.A.
RX MEDLINE=96216498; PubMed=8632007;
RA Shima D.T., Kuroki M., Deutsch U., Ng Y., Adams A.P., D'Amore P.A.;
RT "The mouse gene for vascular endothelial growth factor. Genomic
RT structure, definition of the transcriptional unit, and
RT characterization of transcriptional and post-transcriptional
RT regulatory sequences.";
RL J. Biol. Chem. 271:3877-3883(1996).
CC -1- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and
endothelial cell growth. It induces endothelial cell

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CC proliferation, promotes cell migration, inhibits apoptosis, and
CC induces permeabilization of blood vessels. It binds to the
CC VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
CC heparin (By similarity).
CC -1- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
CC with PlGF (By similarity).
CC -1- SUBCELLULAR LOCATION: VEGF-1 and VEGF-2 are secreted while VEGF-3
CC remains cell-surface associated unless released by heparin.
CC -1- ALTERNATIVE PRODUCTS:
CC Name=VEGF-3; Synonyms=VEGF188;
CC IsoId=Q00731-1; Sequence=D31542;
CC Name=VEGF-1; Synonyms=VEGF164;
CC IsoId=Q00731-2; Sequence=VSP_004626, VSP_004627;
CC Name=VEGF-2; Synonyms=VEGF120;
CC IsoId=Q00731-3; Sequence=VSP_004628;
CC -1- TISSUE SPECIFICITY: In developing embryos, expressed mainly in the
CC chorioallantoic plexus, paraventricular neuroepithelium, placenta and
CC kidney glomeruli. Also found in bronchial epithelium, adrenal
CC gland and in seminiferous tubules of testis. High expression of
CC VEGF continues in kidney glomeruli and choroid plexus in adults.
CC -1- DOMAIN: VEGF-3 contains a basic insert which acts as a cell
CC retention signal.
CC -1- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
CC
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CC
CC EMBL; S37052; AAB22252.1; -
CC EMBL; S38083; AAB22253.1; -
CC EMBL; S38100; AAB22254.1; -
CC EMBL; M95200; AAA40547.1; -
CC EMBL; U41383; -; NOT ANNOTATED_CDS.
CC PIR; A44881; A44881.
CC PIR; B44881; B44881.
CC HSSP; P15692; 2VFF.
CC MGD; MG1:103178; Vegfa.
CC InterPro; IPR000072; PD_growth_factor.
CC Pfam; PF00341; PDGF; 1.
CC ProDom; PD001629; PD_growth_factor; 1.
CC SMART; SM00141; PDGF_1; 1.
CC PROSITE; PS00249; PDGF_1; 1.
CC PROSITE; PS50278; PDGF_2; 1.
CC Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
CC Heparin-binding; Alternative splicing; Multigene family.
CC SIGNAL 1 26
CC CHAIN 27 214 VASCULAR ENDOTHELIAL GROWTH FACTOR A.
CC DISULFID 51 93 BY SIMILARITY.
CC DISULFID 82 127 BY SIMILARITY.
CC DISULFID 86 129 BY SIMILARITY.
CC DISULFID 76 76 INTERCHAIN (BY SIMILARITY).
CC DISULFID 85 85 INTERCHAIN (BY SIMILARITY).
CC CARBOHYD 100 100 N-LINKED (GLCNAC...) (PROBABLE).
CC VARSPLIC 140 140 K->N (in isoform VEGF-1).
CC FT DISULFID 141 164 /FTId=VSP_004626.
CC FT VARSPLIC 141 208 Missing (in isoform VEGF-1).
CC FT VARSPLIC 141 208 /FTId=VSP_004627.
CC FT VARSPLIC 141 208 Missing (in isoform VEGF-2).
CC FT VARSPLIC 141 208 /FTId=VSP_004628.
CC FT CONFLICT 117 118 GE->ER (IN REF. 2).
CC SEQUENCE 214 AA; 25283 MW; B5540B51E4BB6E17 CRC64;
Query Match 76.4%; Score 42; DB 1; Length 214;
Best Local Similarity 66.7%; Pred. No. 1.4;
Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
QY 1 CCNEESLIC 9
|||||:::

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Db      85 CCNDEALEC 93

RESULT 9
VEGA RAT
ID_VEGA_RAT STANDARD; PRT; 214 AA.
AC P16612; Q9JKX7; Q9QXG6; Q9QXG7;
DT 01-AUG-1990 (Rel. 15, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
DE permeability factor) (VPF).
GN VEGF OR VEGFA.
OS Rattus norvegicus [Rat].
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM VEGF-A164), AND SEQUENCE OF 27-190.
RX MEDLINE=90207249; PubMed=2320579;
RA Conn G., Bayne M.L., Soderman D.D., Kwok P.W., Sullivan K.A.,
RA Palisi T.M., Hope D.A., Thomas K.A.;
RT "Amino acid and cDNA sequences of a vascular endothelial cell mitogen
RT that is homologous to platelet-derived growth factor.";
RL Proc. Natl. Acad. Sci. U.S.A. 87:2628-2633(1990).
RN [2]
RP SEQUENCE FROM N.A. (ISOFORMS VEGF-A188; VEGF-A164; VEGF-A144 AND
RP VEGF-A120).
RX MEDLINE=21092309; PubMed=11163598;
RA Ishii H., Oota I., Takuma T., Inomata K.;
RT "Developmental expression of vascular endothelial growth factor in the
RT masseter muscle of rats.";
RL Arch. Oral Biol. 46:77-82(2001).
RN [3]
RP SEQUENCE OF 27-40.
RC TISSUE=Glial tumor;
RX MEDLINE=95221439; PubMed=7706320;
RA Disalvo J., Bayne M.L., Conn G., Kwok P.W., Trivedi P.G.,
RA Soderman D.D., Palisi T.M., Sullivan K.A., Thomas K.A.;
RT "Purification and characterization of a naturally occurring vascular
RT endothelial growth factor/placenta growth factor heterodimer.";
RL J. Biol. Chem. 270:7717-7723(1995).
CC -!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and
CC endothelial cell growth. It induces endothelial cell
CC proliferation, promotes cell migration, inhibits apoptosis, and
CC induces permeabilization of blood vessels. It binds to the
CC VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
CC heparin (By similarity).
CC -!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
CC with FlGF (By similarity).
CC -!- SUBCELLULAR LOCATION: VEGF-A120 is acidic and freely secreted.
CC VEGF-A164 is more basic, has heparin-binding properties and,
CC although a significant proportion remains cell-associated, most is
CC freely secreted. VEGF-A188 is very basic; it is cell-associated
CC after secretion and is bound avidly by heparin and the
CC extracellular matrix, although it may be released as a soluble
CC form by heparin, heparinase or plasmin (By similarity).
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=4;
CC Comment=Additional isoforms seem to exist;
CC Name=VEGF-A188;
CC IsoId=P16612-1; Sequence=Displayed;
CC Name=VEGF-A164;
CC IsoId=P16612-2; Sequence=VSP_004629, VSP_004630;
CC Name=VEGF-A144;
CC IsoId=P16612-3; Sequence=VSP_004632;
CC Name=VEGF-A120;
CC IsoId=P16612-4; Sequence=VSP_004631;
CC -!- TISSUE SPECIFICITY: Expressed in the pituitary, in brain, in
CC particularly in suprapubic and paraventricular nuclei and the
CC choroid plexus. Also found abundantly in the corpus luteum of the
CC ovary and in kidney glomeruli.
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.

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EMBL; M32167; AAA41211.1; -
 EMBL; AF215725; AAF19211.1; -
 EMBL; AF215726; AAF19212.1; -
 EMBL; AF222779; AAF25958.1; -
 HSP; P15692; 1VPP.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF00341; PDGF; 1.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS02278; PDGF_2; 1.
 KW Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
 KW Heparin-binding; Alternative splicing; Multigene family.
 FT SIGNAL 1 26
 FT CHAIN 27 214 VASCULAR ENDOTHELIAL GROWTH FACTOR A.
 FT DISULFID 51 93 BY SIMILARITY.
 FT DISULFID 82 127 BY SIMILARITY.
 FT DISULFID 86 129 BY SIMILARITY.
 FT DISULFID 76 76 INTERCHAIN (BY SIMILARITY).
 FT DISULFID 85 85 INTERCHAIN (BY SIMILARITY).
 FT CARBOHYD 100 100 N-LINKED (GLCNAC...).
 FT VARSPPLIC 140 140 K -> N (in isoform VEGF-A164).
 FT VARSPPLIC 141 164 /FTId=VSP_004629.
 FT VARSPPLIC 141 164 Missing (in isoform VEGF-A164).
 FT VARSPPLIC 141 208 /FTId=VSP_004630.
 FT VARSPPLIC 165 208 Missing (in isoform VEGF-A120).
 FT VARSPPLIC 165 208 /FTId=VSP_004631.
 FT CONFLICT 101 101 Missing (in isoform VEGF-A144).
 FT CONFLICT 101 101 /FTId=VSP_004632.
 SQ SEQUENCE 214 AA; 25239 MW; 60FBB876F5304946 CRC64;
 Query Match 76.4%; Score 42; DB 1; Length 214;
 Best Local Similarity 66.7%; Pred. No. 1.4;
 Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 QY 1 CNNESLIC 9
 Db 85 CCNDEALEC 93

RESULT 10

VEGA_HORSE
 ID_VEGA_HORSE STANDARD; PRT; 190 AA.
 AC Q9GKR0;
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
 DE permeability factor) (VPF).
 GN VEGF OR VEGFA.
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Miura N., Misumi K., Kawahara K., Nakashima M., Fukumitsu S.,
 RA Kawabata H., Uto N., Oka T., Maruyama I., Sakamoto H.;
 RT "Cloning of cDNA and high-level expression of equine vascular
 RT endothelial growth factor (VEGF)."
 RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
 CC -!- FUNCTION: Growth factor active in angiogenesis, and endothelial
 CC cell growth. Induces endothelial proliferation and vascular


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CC permeability (By similarity).
CC -1- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
CC with PlGF (By similarity).
CC -1- SUBCELLULAR LOCATION: Secreted but remains associated to cells or
CC to the extracellular matrix unless released by heparin (By
CC similarity).
CC -1- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
-----
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-----
CC EMBL; AB053350; BAB20890.1; -.
CC HSP; P15692; 1VGH.
CC InterPro; IPR002400; GF_cysknot.
CC InterPro; IPR000072; PD_growth_factor.
CC Pfam; PF00341; PDGF; 1.
CC PRINTS; PR00438; GFCYSKNOT.
CC ProDom; PD001629; PD_growth_factor; 1.
CC SMART; SM00141; PDGF; 1.
CC PROSITE; PS00249; PDGF_1; 1.
CC PROSITE; PS0278; PDGF_2; 1.
CC Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
KW Multigene family.
FT SIGNAL 1 26
FT CHAIN 27 190 VASCULAR ENDOTHELIAL GROWTH FACTOR A.
FT DISULFID 51 93
FT DISULFID 82 127
FT DISULFID 86 129
FT DISULFID 76 76
FT DISULFID 85 85
FT DISULFID 100 100 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 100 100 N-LINKED (GLCNAC...) (POTENTIAL).
SQ SEQUENCE 130 AA; 22312 MW; 87E9E161439E5F87 CRC64;

Query Match 74.5%; Score 41; DB 1; Length 190;
Best Local Similarity 66.7%; Pred. No. 1.9;
Matches 6; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 85 CCNDEGLEC 93

RESULT 11
VEGA_PIG STANDARD; PRT; 190 AA.
AC P49151; Q9GLS2;
DT 01-FEB-1996 (Rel. 33, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
DE permeability factor) (VPF).
GN VEGF OR VEGFA.
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX NCBI_TaxID=9823;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Heart;
RA Sharma H.S., Tang Z.H., Gho B.C.H., Verdouw P.D.;
RA MEDLINE=95143284; PubMed=7841203;
RT "Nucleotide sequence and expression of the porcine vascular
RT endothelial growth factor."
RL Biochim. Biophys. Acta 1260:235-238 (1995).
RN [2]
RP SEQUENCE FROM N.A.
RA Lee T., Canty J.M.;
RA "PCR cloning of porcine cardiac vascular endothelial growth factor
RT
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RT gene.";
RL Submitted (NOV-2000) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and
CC endothelial cell growth. It induces endothelial cell
CC proliferation, promotes cell migration, inhibits apoptosis, and
CC induces permeabilization of blood vessels. It binds to the
CC VEGFR1/flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
CC heparin (By similarity).
CC -1- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
CC with PlGF (By similarity).
CC -1- SUBCELLULAR LOCATION: Secreted but remains associated to cells or
CC to the extracellular matrix unless released by heparin (By
CC similarity).
CC -1- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
-----
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-----
CC EMBL; X81380; CAA57143.1; -.
CC EMBL; AF318502; AAG33064.1; -.
CC PIR; S52130; S52130.
CC HSP; P15692; 1VGH.
CC InterPro; IPR002400; GF_cysknot.
CC InterPro; IPR000072; PD_growth_factor.
CC Pfam; PF00341; PDGF; 1.
CC PRINTS; PR00438; GFCYSKNOT.
CC ProDom; PD001629; PD_growth_factor; 1.
CC SMART; SM00141; PDGF; 1.
CC PROSITE; PS00249; PDGF_1; 1.
CC PROSITE; PS0278; PDGF_2; 1.
CC Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
KW Heparin-binding; Multigene family.
FT SIGNAL 1 26
FT CHAIN 27 190 VASCULAR ENDOTHELIAL GROWTH FACTOR A.
FT DISULFID 51 93
FT DISULFID 82 127
FT DISULFID 86 129
FT DISULFID 76 76
FT DISULFID 85 85
FT CARBOHYD 100 100 N-LINKED (GLCNAC...) (POTENTIAL).
FT CONFLICT 102 102 T -> A (IN REF. 2).
SQ SEQUENCE 190 AA; 22368 MW; 04D40B8D7913047F CRC64;

Query Match 74.5%; Score 41; DB 1; Length 190;
Best Local Similarity 66.7%; Pred. No. 1.9;
Matches 6; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 85 CCNDEGLEC 93

RESULT 12
VEGA_CANFA STANDARD; PRT; 214 AA.
AC Q9MYV3; Q9XSF3; Q9XSF4; Q9XSF5;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
DE permeability factor) (VPF).
GN VEGF OR VEGFA.
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM VEGF-188).
```


RA Lei J., Jiang A., Pei D.;
 RT "Identification and characterization of a new splicing variant of
 RL vascular endothelial growth factor: VEGF183.";
 RL Biochim. Biophys. Acta 1443:400-406(1998).
 [8]
 RN SEQUENCE FROM N.A. (ISOFORM VEGF165).
 RN TISSUE=Breast;
 RC MEDLINE=98119755; PubMed=9450968;
 RA Claflay K.P., Shih S.-C., Mullen A., Dziennis S., Cusick J.L.,
 RA Abrams K.R., Lee S.W., Detmar M.;
 RT "Identification of a human VpF/VEGF 3' untranslated region mediating
 RT hypoxia-induced mRNA stability.";
 RL Mol. Biol. Cell 9:469-481(1998).
 [9]
 RN SEQUENCE FROM N.A. (ISOFORM VEGF165).
 RN TISSUE=Hemangioendothelioma;
 RC Murata H., Fukushima J., Hattori S., Okuda K., Yanagi H.;
 RA "Human cDNA for the vascular endothelial growth factor isoform
 RT VEGF165.";
 RL Submitted (DEC-1998) to the EMBL/GenBank/DBJ databases.
 [10]
 RN SEQUENCE FROM N.A. (ISOFORM VEGF148).
 RN TISSUE=Renal glomerulus;
 RC MEDLINE=99394945; PubMed=10464055;
 RA Whittle C.J., Gillespie K.M., Harrison R., Mathieson P.W.,
 RA Harper S.J.;
 RT "Heterogeneous vascular endothelial growth factor (VEGF) isoform mRNA
 RT and receptor mRNA expression in human glomeruli, and the
 RL identification of VEGF148 mRNA, a novel truncated splice variant.";
 RL Clin. Sci. 97:303-312(1999).
 [11]
 RN SEQUENCE FROM N.A. (ISOFORM VEGF121).
 RA Sato J.D., Whitney R.G.;
 RT "Human cDNA for vascular endothelial growth factor isoform VEGF121.";
 RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
 [12]
 RN SEQUENCE FROM N.A.
 RA Williams S.;
 RL Submitted (DEC-2000) to the EMBL/GenBank/DBJ databases.
 [13]
 RN SEQUENCE FROM N.A. (ISOFORM VEGF165).
 RA Liu J., Peng X., Yuan J., Qiang B.;
 RT "Cloning of vascular endothelial growth factor (VEGF) cDNA.";
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
 [14]
 RN SEQUENCE FROM N.A. (ISOFORM VEGF165).
 RC TISSUE=Heart;
 RA Shan Z.X., Yu X.Y., Lin Q.X., Fu Y.H., Zheng M., Tan H.H., Lin S.G.;
 RT "Cloning and identification of vascular endothelial growth factor
 RT isoform VEGF165.";
 RL Submitted (FEB-2002) to the EMBL/GenBank/DBJ databases.
 [15]
 RN SEQUENCE OF 23-232 FROM N.A. (ISOFORM VEGF165).
 RA Rieder M.J., Armet T.Z., Carrington D.P., Chung M.-W., Lee K.L.,
 RA Poel C.L., Toth E.J., Yi Q., Nickerson D.A.;
 RL Submitted (OCT-2001) to the EMBL/GenBank/DBJ databases.
 [16]
 RN SEQUENCE OF 114-209 FROM N.A. (ISOFORM VEGF183).
 RC TISSUE=Retina;
 RA Jingjing L., Xue Y., Agarwal N., Roque R.S.;
 RT "Human Muller cells express VEGF183, a novel spliced variant of
 RT vascular endothelial growth factor.";
 RL Invest. Ophthalmol. Vis. Sci. 40:752-759(1999).
 [17]
 RN PRELIMINARY SEQUENCE OF 27-36; 43-50 AND 59-81.
 RX MEDLINE=90062112; PubMed=2594205;
 RA Connolly D.T., Olander J.V., Heuvelman D., Nelson R., Monsell R.,
 RA Siegel N., Haymore B.L., Leimgruber R., Feder J.;
 RT "Human vascular permeability factor. Isolation from U937 cells.";
 RL J. Biol. Chem. 264:20017-20024(1989).
 [18]
 RN SEQUENCE OF 27-41.

RX MEDLINE=93145946; PubMed=7678805;
 RA Fiebig B.L., Jaeger B., Schoellmann C., Weindel K., Walting J.,
 RA Kuchs G., Marne D., Hug H., Weich H.A.;
 RT "Synthesis and assembly of functionally active human vascular
 RT endothelial growth factor homodimers in insect cells.";
 RL Eur. J. Biochem. 211:19-26(1993).
 [19]
 RN X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF 34-135.
 RP MEDLINE=97352774; PubMed=9207067;
 RX Muller Y.A., Li B., Christinger H.W., Wells J.A., Cunningham B.C.,
 RA de Vos A.M.;
 RT "Vascular endothelial growth factor: crystal structure and functional
 RT mapping of the kinase domain receptor binding site.";
 RL Proc. Natl. Acad. Sci. U.S.A. 94:7192-7197(1997).
 [20]
 RN X-RAY CRYSTALLOGRAPHY (1.93 ANGSTROMS) OF 34-135.
 RP MEDLINE=98035455; PubMed=9351807;
 RX Muller Y.A., Christinger H.W., Keyt B.A., de Vos A.M.;
 RA "The crystal structure of vascular endothelial growth factor (VEGF)
 RT refined to 1.93-A resolution: multiple copy flexibility and receptor
 RT binding.";
 RL Structure 5:1325-1338(1997).
 [21]
 RN X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 39-134.
 RP MEDLINE=99119204; PubMed=9922142;
 RX Wiesmann C., Christinger H.W., Cochran A.G., Cunningham B.C.,
 RA Fairbrother W.J., Keenan C.J., Meng G., de Vos A.M.;
 RT "Crystal structure of the complex between VEGF and a receptor-blocking
 RT peptide.";
 RL Biochemistry 37:17765-17772(1998).
 [22]
 RN STRUCTURE BY NMR OF 34-135.
 RP MEDLINE=97477915; PubMed=9336848;
 RX Fairbrother W.J., Champe M.A., Christinger H.W., Keyt B.A.,
 RA Starovasnik M.A.;
 RT "1H, 13C, and 15N backbone assignment and secondary structure of the
 RT receptor-binding domain of vascular endothelial growth factor.";
 RL Protein Sci. 6:2250-2260(1997).
 [23]
 RN STRUCTURE BY NMR OF 137-215.
 RP MEDLINE=98298440; PubMed=9634701;
 RX Fairbrother W.J., Champe M.A., Christinger H.W., Keyt B.A.,
 RA Starovasnik M.A.;
 RT "Solution structure of the heparin-binding domain of vascular
 RT endothelial growth factor.";
 RL Structure 6:637-648(1998).
 [24]
 RN FUNCTION.
 RP MEDLINE=21320570; PubMed=11427521;
 RX Murphy J.F., Fitzgerald D.J.;
 RA "Vascular endothelial growth factor induces cyclooxygenase-dependent
 RT proliferation of endothelial cells via the VEGF-2 receptor.";
 RL FASEB J. 15:1667-1669(2001).
 CC -!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and
 CC endothelial cell growth. It induces endothelial cell
 CC proliferation, promotes cell migration, inhibits apoptosis, and
 CC induces permeabilization of blood vessels. It binds to the
 CC VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
 CC heparin. Neupilin-1 binds isoforms VEGF-165 and VEGF-145.
 CC -!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
 CC with PLGF (By similarity).
 CC -!- SUBCELLULAR LOCATION: VEGF121 is acidic and freely secreted.
 CC VEGF165 is more basic, has heparin-binding properties and,
 CC although a significant proportion remains cell-associated, most is

Query Match 74.5%; Score 41; DB 1; Length 232;
 Best Local Similarity 66.7%; Pred. No. 2.3;
 Matches 6; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 QY 1 CCNEESLIC 9
 DB 86 CCNDGLEC 94

```

RESULT 14
VG13 HSV11 STANDARD; PRT; 82 AA.
AC Q00156;
DT 01-DEC-1992 (Rel. 24, Created)
DT 01-DEC-1992 (Rel. 24, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Hypothetical gene 13 zinc-binding protein.
GN 13.
OS Ictalurid herpesvirus 1 (Channel catfish virus) (CCV).
OC Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
OC Ictalurid Herpes-like viruses.
OX NCBI_TaxID=10401;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Auburn 1;
RX MEDLINE=92087490; PubMed=1727613;
RA Davison A.J.;
RT "Channel catfish virus: a new type of herpesvirus.";
RL Virology 186:9-14(1992).
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL; M75136; AAA88194.1; -.
CC DR EMBL; M75136; AAA88116.1; -.
CC DR PIR; E36787; E36787.
CC KW Hypothetical protein; Zinc; Zinc-finger.
CC SQ SEQUENCE 82 AA; 8821 MW; 6C009A50FF8C4C67 CRC64;
Query Match 72.7%; Score 40; DB 1; Length 82;
Best Local Similarity 66.7%; Pred. No. 1.2;
Matches 6; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
QY 1 CCNEESLIC 9
Db 11 CCNPMSLIC 19
RESULT 15
VEGC RAT STANDARD; PRT; 126 AA.
AC C35757;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Vascular endothelial growth factor C precursor (VEGF-C) (Vascular
DE endothelial growth factor related protein) (VRP) (Flt4 ligand) (Flt4-
DE L) (Fragment).
GN VEGFC.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Sprague-Dawley; TISSUE=Lung;
RA Mandriota S.J.; Pepper M.S.;
RL Submitted (JUN-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Growth factor active in angiogenesis, and endothelial
CC cell growth, stimulating their proliferation and migration and
CC also has effects on the permeability of blood vessels. May
CC function in angiogenesis of the venous and lymphatic vascular
CC systems during embryogenesis, and also in the maintenance of
CC differentiated lymphatic endothelium in adults. Binds and
CC activates VEGFR-2 (Flk1) and VEGFR-3 (Flt4) receptors.
CC -!- SUBUNIT: Homodimer; non-covalent and antiparallel.
CC -----
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- PTM: Undergoes a complex proteolytic maturation which generates a
CC variety of processed secreted forms with increased activity toward
CC VEGFR-3, but only the fully processed form could activate VEGFR-2.
CC VEGF-C first form an antiparallel homodimer linked by disulfide
CC bonds. Before secretion, a cleavage occurs between arg-227 and
CC ser-228 producing an heterotetramer. The next extracellular step
CC of the processing removes the N-terminal propeptide. Finally the
CC mature VEGF-C is composed mostly of two VEGF homology domains
CC (VHDs) bound by non-covalent interactions (By similarity).
CC -!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
CC -----
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CC -----
CC EMBL; AF010302; AAB63248.1; -.
CC DR HSSP; P15692; 2VPF.
CC DR InterPro; IPR002400; GF_cysknot.
CC DR InterPro; IPR000072; PD_growth_factor.
CC Pfam; PF00341; PDGF; 1.
CC PRINTS; PR00438; GFCYSKNOT.
CC ProDom; PD001629; PD_growth_factor; 1.
CC SMART; SM00141; PDGF; 1.
CC PROSITE; PS0278; PDGF 2; 1.
CC K0 Angiogenesis; Mitogen; Growth factor; Glycoprotein;
CC Cleavage on pair of basic residues; Multigene family.
CC FT NON_TER 1
CC CHAIN <1 71
CC DISULFID 72 >126
CC DISULFID 6 53
CC DISULFID 10 55
CC DISULFID 9 9
CC CARBOHYD 19 19
CC CARBOHYD 49 49
CC CARBOHYD 84 84
CC NON_TER 126 126
CC SQ SEQUENCE 126 AA; 13977 MW; 8F365AFBC4E037B0 CRC64;
Query Match 70.9%; Score 39; DB 1; Length 126;
Best Local Similarity 66.7%; Pred. No. 2.8;
Matches 6; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 CCNEESLIC 9
Db 9 CCNSEGLQC 17
Search completed: September 5, 2004, 09:56:05
Job time : 4.09091 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:46:09 ; Search time 20.3636 Seconds
(without alignments)
139.448 Million cell updates/sec

Title: US-09-761-636A-9
Perfect score: 55
Sequence: 1 CCNEESLIC 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

SPTREMBL 25.*
1: sp_archaea.*
2: sp_bacteria.*
3: sp_fungi.*
4: sp_human.*
5: sp_invertebrate.*
6: sp_mammal.*
7: sp_mhc.*
8: sp_organelle.*
9: sp_phage.*
10: sp_plant.*
11: sp_rodent.*
12: sp_virus.*
13: sp_vertebrate.*
14: sp_unclassified.*
15: sp_rvirus.*
16: sp_bacteriap.*
17: sp_archaeap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Query Length	ID	Description
1	49	89.1	252	13	Q8QGD7
2	49	89.1	326	11	Q91ZE4
3	46	83.6	152	12	Q8B571
4	45	81.8	65	6	Q8MIN0
5	45	81.8	68	6	Q97500
6	45	81.8	75	6	O18843
7	45	81.8	78	6	Q9N1S2
8	45	81.8	109	6	Q8MIN1
9	45	81.8	118	6	Q9MZB1
10	45	81.8	120	6	Q866G4
11	45	81.8	123	6	Q9N1S1
12	45	81.8	131	6	Q8MJ86
13	45	81.8	132	12	Q9TAF3
14	45	81.8	136	12	Q8QGE8
15	45	81.8	148	13	O42571
16	45	81.8	190	6	O77643

17	45	81.8	194	13	O42572
18	42	76.4	64	11	Q80UA0
19	42	76.4	110	11	O88911
20	42	76.4	126	3	Q05458
21	42	76.4	141	11	O70123
22	42	76.4	144	13	O73822
23	42	76.4	188	13	O73682
24	42	76.4	190	11	Q91ZE1
25	42	76.4	190	11	Q9QX39
26	41	74.5	124	6	Q9GK00
27	41	74.5	124	6	Q8SPZ9
28	41	74.5	126	6	Q9BDP7
29	41	74.5	127	6	Q8WMQ4
30	41	74.5	128	6	Q8SPL5
31	41	74.5	184	6	Q8HY70
32	41	74.5	189	6	Q95LQ4
33	41	74.5	191	4	Q96KJ0
34	41	74.5	191	4	Q96L82
35	41	74.5	191	6	Q95NE5
36	40	72.7	895	3	Q9C1S1
37	39	70.9	146	13	Q90X23
38	39	70.9	146	13	Q90X24
39	39	70.9	162	10	O82617
40	39	70.9	326	11	Q91ZH6
41	39	70.9	396	13	Q7T3I6
42	39	70.9	415	11	Q91ZE3
43	39	70.9	418	13	O57352
44	38	69.1	316	17	O8TWK6
45	38	69.1	324	16	Q7V4L6

ALIGNMENTS

RESULT 1

Q8QGD7 ID Q8QGD7 PRELIMINARY; PRT; 252 AA.
AC Q8QGD7
DT 01-JUN-2002 (TREMBLrel. 21, Created)
DT 01-JUN-2002 (TREMBLrel. 21, Last sequence update)
DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor D.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RA Diaz-Trelles R., Rodriguez-Leon J., Kawakami Y.,
RA Ispisua-Belmonte J.C.;
RT "Expression of the chick vascular endothelial growth factor D gene during limb development.";
RL Mech. Dev. 0:0-0(2002).
DR EMBL; AF479650; AAM12733.1; -;
DR GO; GO:0016020; C.membrane; IEA.
DR GO; GO:0008083; F.growth factor activity; IEA.
DR GO; GO:0008151; P.cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 252 AA; 28767 MW; 643475DAB2E72F27 CRC64;

Query Match 89.1%; Score 49; DB 13; Length 252;
Best Local Similarity 88.9%; Pred. No. 0.11;
Matches 8; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9

Db 145 CCNEESLIC 153

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DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS50278; PDGF_2; 1.
SQ SEQUENCE 152 AA; 16202 MW; F4B3956D60B37A3D CRC64;

Query Match      83.6%; Score 46; DB 12; Length 152;
Best Local Similarity 77.8%; Pred. No. 0.26;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
Db 88 CCNDESOIC 96

RESULT 4
Q8M1NO          PRELIMINARY; PRT; 65 AA.
ID Q8M1NO
AC Q8M1NO;
DT 01-OCT-2002 (TrEMBLrel. 22, Created)
DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor 121 (Fragment).
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Corpus luteum;
RA "Kawate N., Tsuji M., Tamada H., Inaba T., Sawada T.;
RT "Changes of Messenger RNAs Encoding Vascular Endothelial Growth Factor
RT and Its Receptors during the Development and Maintenance of Caprine
RT Corpora Lutea.";
RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY114353; C:membrane; IEA.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
FT NON TER 1
SQ SEQUENCE 65 AA; 7562 MW; BA3E5384364B05E3 CRC64;

Query Match      81.8%; Score 45; DB 6; Length 65;
Best Local Similarity 77.8%; Pred. No. 0.19;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
Db 4 CCNDESLIC 12

RESULT 5
Q87500          PRELIMINARY; PRT; 68 AA.
ID Q87500
AC Q87500;
DT 01-MAY-1999 (TrEMBLrel. 10, Created)
DT 01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor (Fragment).
GN VEGF.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP SEQUENCE FROM N.A.
RA Inoue K., Kawabe Y., Kodama T.;
RT "Rabbit VEGF cDNA, partial.";

Q8B571          PRELIMINARY; PRT; 152 AA.
ID Q8B571
AC Q8B571;
DT 01-MAR-2003 (TrEMBLrel. 23, Created)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Vascular endothelial growth factor-like protein.
GN VEGF.
OS Pseudocowpox virus.
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=129726;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=VR634;
RA Ueda N., Wise L.M., Stacker S.A., Fleming S.B., Mercer A.A.;
RT "Pseudocowpox virus encodes a homolog of vascular endothelial growth
RT factor.";
RL Virology 0:0-0(2003).
DR EMBL; AF542070; AAO16216.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknob.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.

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RL Submitted (NOV-1998) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AB020216; BAA36949.1; -.
 DR HSP; P49763; IFZV.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0008083; F:growth factor activity; IEA.
 DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF00341; PDGF_1.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF_1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS50278; PDGF_2; 1.
 FT NON_TER 1
 FT NON_TER 68
 SQ SEQUENCE 68 AA; 7819 MW; 687638661E98DEE0 CRC64;

Query Match 81.8%; Score 45; DB 6; Length 68;
 Best Local Similarity 77.8%; Pred. No. 0.2;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
 Db 40 CCNDESLEC 48

RESULT 6

ID Q18843 PRELIMINARY; PRT; 75 AA.
 AC O18843;
 DT 01-JAN-1998 (TrEMBLrel. 05, Created)
 DT 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Vascular endothelial growth factor (Fragment).
 GN VEGF.
 OS Oryctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
 OX NCBI_TaxID=9986;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=NEW ZEALAND WHITE; TISSUE=Skeletal muscle;
 RX MEDLINE=98191144; PubMed=9530113;
 RA Skerjanc D., Jaschinski F., Heine G., Pette D.;
 RT "Sequential increases in capillarization and mitochondrial enzymes in
 RT low-frequency-stimulated rabbit muscle.";
 RL Am. J. Physiol. 274:C810-C818(1998).
 DR EMBL; AF022179; AAC15469.1; -.
 DR HSP; P49763; IFZV.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0008083; F:growth factor activity; IEA.
 DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF00341; PDGF_1.
 DR PRINTS; PR00438; GFCYSKNOT.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF_1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS50278; PDGF_2; 1.
 FT NON_TER 1
 FT NON_TER 75
 SQ SEQUENCE 75 AA; 8720 MW; DDCE2C5B29E69359 CRC64;

Query Match 81.8%; Score 45; DB 6; Length 75;
 Best Local Similarity 77.8%; Pred. No. 0.22;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
 Db 28 CCNDESLEC 36

RESULT 7

ID Q9N1S2 PRELIMINARY; PRT; 78 AA.
 AC Q9N1S2;
 DT 01-OCT-2000 (TrEMBLrel. 15, Created)
 DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Vascular endothelial growth factor isoform 121 (Fragment).
 GN VEGF.
 OS Capreolus capreolus (Roe deer).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoides;
 OC Cervidae; Odocoileinae; Capreolus.
 OX NCBI_TaxID=9858;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testis;
 RX MEDLINE=20532861; PubMed=11078967;
 RA Wagener A., Blottner S., Goritz F., Fickel J.;
 RT "Detection of growth factors in the testis of roe deer (Capreolus
 RT capreolus).";
 RL Anim. Reprod. Sci. 64:65-75(2000).
 DR EMBL; AF152593; AAF73232.1; -.
 DR HSP; P49763; IFZV.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0008083; F:growth factor activity; IEA.
 DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF00341; PDGF_1.
 DR PRINTS; PR00438; GFCYSKNOT.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF_1; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS50278; PDGF_2; 1.
 FT NON_TER 1
 FT NON_TER 78
 SQ SEQUENCE 78 AA; 9131 MW; 7EE20DDFFC17847C CRC64;

Query Match 81.8%; Score 45; DB 6; Length 78;
 Best Local Similarity 77.8%; Pred. No. 0.22;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
 Db 24 CCNDESLEC 32

RESULT 8

ID Q8MIN1 PRELIMINARY; PRT; 109 AA.
 AC Q8MIN1;
 DT 01-OCT-2002 (TrEMBLrel. 22, Created)
 DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Vascular endothelial growth factor 165 (Fragment).
 OS Capra hircus (Goat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoides;
 OC Bovidae; Caprinae; Capra.
 OX NCBI_TaxID=9925;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Corpus luteum;
 RA Kawate N., Tsuji M., Tamada H., Inaba T., Sawada T.;
 RT "Changes of Messenger RNAs Encoding Vascular Endothelial Growth Factor
 RT and Its Receptors during the Development and Maintenance of Caprine
 RT Corpora Lutea.";
 RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AY114352; AAM76673.1; -.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0008083; F:growth factor activity; IEA.
 DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
 DR InterPro; IPR000072; PD_growth_factor.

```

DR Pfam: PF00341; PDGF; 1.
DR ProDom: PD001629; PD_growth_factor; 1.
DR SMART: SM00141; PDGF; 1.
DR PROSITE; PS50278; PDGF_2; 1.
FT NON TER 1
SQ SEQUENCE 109 AA; 12656 MW; 912657251A37E023 CRC64;

Query Match      81.8%; Score 45; DB 6; Length 109;
Best Local Similarity 77.8%; Pred. No. 0.33;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
    |||:|||||
Db 4 CCNDESLEC 12

RESULT 9
Q9MZB1
ID Q9MZB1 PRELIMINARY; PRT; 118 AA.
AC Q9MZB1
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor (Fragment).
GN VEGF.
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Placental artery endothelium;
RA Zheng J., Tsai S.C., Magness R.R.;
RT "Growth factor expression in ovine fetal placental artery endothelial
RT cells."
RL Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF250375; AAF5258.1; -.
DR HSSP; P49763; 1FZV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR Pfam; PF00341; PDGF; 1_growth_factor.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
FT NON TER 1
SQ SEQUENCE 118 AA; 13931 MW; 757DC53AA56378A6 CRC64;

Query Match      81.8%; Score 45; DB 6; Length 118;
Best Local Similarity 77.8%; Pred. No. 0.33;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
    |||:|||||
Db 57 CCNDESLEC 65

RESULT 10
Q866G4
ID Q866G4 PRELIMINARY; PRT; 120 AA.
AC Q866G4;
DT 01-JUN-2003 (TrEMBLrel. 24, Created)
DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Vascular endothelial growth factor (Fragment).
GN VEGF.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP SEQUENCE FROM N.A.
RA Clausen I., Kietz S., Fischer B.;
RT "Transcriptional changes in rabbit preimplantation blastocysts upon
RT exposure to polychlorinated biphenyls."
RL Submitted (DEC-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY196796; AAC42518.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
FT NON TER 1
FT NON TER 120
SQ SEQUENCE 120 AA; 14032 MW; E563C54980DCE1E8 CRC64;

Query Match      81.8%; Score 45; DB 6; Length 120;
Best Local Similarity 77.8%; Pred. No. 0.33;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
    |||:|||||
Db 73 CCNDESLEC 81

RESULT 11
Q9N1S1
ID Q9N1S1 PRELIMINARY; PRT; 123 AA.
AC Q9N1S1;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor isoform 165 (Fragment).
GN VEGF.
OS Capreolus capreolus (Roe deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervidae;
OC Cervidae; Odocoileinae; Capreolus.
OX NCBI_TaxID=9858;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=20532861; PubMed=11078967;
RA Wagener A., Blotner S., Goritz F., Fickel J.;
RT "Detection of growth factors in the testis of roe deer (Capreolus
RT capreolus)."
RL Anim. Reprod. Sci. 64:65-75(2000).
DR EMBL; AF152594; AAF73233.1; -.
DR HSSP; P49763; 1FZV.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
FT NON TER 1
FT NON TER 123
SQ SEQUENCE 123 AA; 14354 MW; 0A756F54105A4CE1 CRC64;

Query Match      81.8%; Score 45; DB 6; Length 123;

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Best Local Similarity 77.8%; Pred. No. 0.34;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 24 CCNDESLEC 32

RESULT 12
Q8MJ86
ID Q8MJ86 PRELIMINARY; PRT; 131 AA.
AC Q8MJ86
DT 01-OCT-2002 (TEMBLrel. 22, Created)
DT 01-OCT-2002 (TEMBLrel. 22, Last sequence update)
DT 01-JUN-2003 (TEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor-3 (Fragment).
OS Capreolus capreolus (Roer deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidae;
OC Cervidae; Odocoileinae; Capreolus.
OX NCBI_TaxID=9858;
RN 1
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RA Wagener A., Fickel J.;
RL "Detection of VEGF in roe deer testis.";
RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF514284; AAM49789.1; -
DR GO; GO:0016020; C.membrane; IEA.
DR GO; GO:0008083; F.growth factor activity; IEA.
DR GO; GO:0008151; P.cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS50278; PDGF_2; 1.
FT NON_TER 1
FT NON_TER 131
SQ SEQUENCE 131 AA; 15358 MW; 99719A58EEAC7FCA CRC64;

Query Match 81.8%; Score 45; DB 6; Length 131;
Best Local Similarity 77.8%; Pred. No. 0.36;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 2 CCNDESLEC 10

RESULT 13
Q9YMF3
ID Q9YMF3 PRELIMINARY; PRT; 132 AA.
AC Q9YMF3
DT 01-MAY-1999 (TEMBLrel. 10, Created)
DT 01-MAY-1999 (TEMBLrel. 10, Last sequence update)
DT 01-JUN-2003 (TEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor homolog Vegf-e (Vascular endothelial growth factor-like protein).
GN VEGF-E.
OS Orf virus.
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=10258;
RN 1
RP SEQUENCE FROM N.A.
RC STRAIN=D1701;
RA Meyer M., Claus M., Lepple-Wienhues A., Waltenberger J.,
RA Augustin H.G., Ziche M., Lanz C., Buettner M., Rziha H.J., Dehio C.;
RT "A novel vascular endothelial growth factor encoded by orf virus,
RT VEGF-E, mediates angiogenesis via signalling through VEGFR-2 (KDR) but
RT not VEGFR-1 (Flt-1) receptor tyrosine kinases.";
RL EMBO J. 18:363-374 (1999).

Best Local Similarity 77.8%; Pred. No. 0.34;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 24 CCNDESLEC 32

RESULT 12
Q8MJ86
ID Q8MJ86 PRELIMINARY; PRT; 131 AA.
AC Q8MJ86
DT 01-OCT-2002 (TEMBLrel. 22, Created)
DT 01-OCT-2002 (TEMBLrel. 22, Last sequence update)
DT 01-JUN-2003 (TEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor-3 (Fragment).
OS Capreolus capreolus (Roer deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidae;
OC Cervidae; Odocoileinae; Capreolus.
OX NCBI_TaxID=9858;
RN 1
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RA Wagener A., Fickel J.;
RL "Detection of VEGF in roe deer testis.";
RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF514284; AAM49789.1; -
DR GO; GO:0016020; C.membrane; IEA.
DR GO; GO:0008083; F.growth factor activity; IEA.
DR GO; GO:0008151; P.cell growth and/or maintenance; IEA.
DR InterPro; IPR000072; PD_growth_factor.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS50278; PDGF_2; 1.
FT NON_TER 1
FT NON_TER 131
SQ SEQUENCE 131 AA; 15358 MW; 99719A58EEAC7FCA CRC64;

Query Match 81.8%; Score 45; DB 6; Length 131;
Best Local Similarity 77.8%; Pred. No. 0.36;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 2 CCNDESLEC 10

RESULT 13
Q9YMF3
ID Q9YMF3 PRELIMINARY; PRT; 132 AA.
AC Q9YMF3
DT 01-MAY-1999 (TEMBLrel. 10, Created)
DT 01-MAY-1999 (TEMBLrel. 10, Last sequence update)
DT 01-JUN-2003 (TEMBLrel. 24, Last annotation update)
DE Vascular endothelial growth factor homolog Vegf-e (Vascular endothelial growth factor-like protein).
GN VEGF-E.
OS Orf virus.
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=10258;
RN 1
RP SEQUENCE FROM N.A.
RC STRAIN=D1701;
RA Meyer M., Claus M., Lepple-Wienhues A., Waltenberger J.,
RA Augustin H.G., Ziche M., Lanz C., Buettner M., Rziha H.J., Dehio C.;
RT "A novel vascular endothelial growth factor encoded by orf virus,
RT VEGF-E, mediates angiogenesis via signalling through VEGFR-2 (KDR) but
RT not VEGFR-1 (Flt-1) receptor tyrosine kinases.";
RL EMBO J. 18:363-374 (1999).

Best Local Similarity 77.8%; Pred. No. 0.34;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 69 CCNDESLEC 77

Query Match 81.8%; Score 45; DB 12; Length 132;
Best Local Similarity 77.8%; Pred. No. 0.36;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 69 CCNDESLEC 77

RESULT 14
Q80GE8
ID Q80GE8 PRELIMINARY; PRT; 136 AA.
AC Q80GE8
DT 01-JUN-2003 (TEMBLrel. 24, Created)
DT 01-JUN-2003 (TEMBLrel. 24, Last sequence update)
DT 01-OCT-2003 (TEMBLrel. 25, Last annotation update)
DE VEGF-like protein.
OS Orf virus.
OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC Parapoxvirus.
OX NCBI_TaxID=10258;
RN 1
RP SEQUENCE FROM N.A.
RC STRAIN=Orf-11;
RA McInnes C.J., Wood A.R.;
RT "A preliminary transcript map of the early genes of orf virus.";
RL Submitted (FEB-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY236150; AAP03726.1; -
DR GO; GO:0016020; C.membrane; IEA.
DR GO; GO:0008083; F.growth factor activity; IEA.
DR GO; GO:0008151; P.cell growth and/or maintenance; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; PD_growth_factor; 1.
DR PRINTS; PR00438; GFCVSKNOT.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 136 AA; 15082 MW; 9768C9C42B6CB267 CRC64;

Query Match 81.8%; Score 45; DB 12; Length 136;
Best Local Similarity 77.8%; Pred. No. 0.37;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 1 CCNDESLEC 9

```

Db 70 CCNDESLEC 78

RESULT 15

O42571 ID O42571 PRELIMINARY; PRT; 148 AA.
 AC O42571; 1998 (TrEMBLrel. 05, Created)
 DT 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Vascular endothelial growth factor 122.
 DE VEGF.
 GN VEGF.
 OS Xenopus laevis (African clawed frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidea; Pipidae;
 OC Xenopodinae; Xenopus.
 OX NCBI_TaxID=8335;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Cleaver O., Tonissen K.F., Saha M.S., Krieg P.A.;
 RT "Neovascularization of the Xenopus embryo."
 RL Dev. Dyn. 0:0-0(1997).
 DR EMBL; AF008593; AAB63679.1; -.
 DR HSP; P49763; 1FZV.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0008083; P:growth factor activity; IEA.
 DR GO; GO:0008151; P:cell growth and/or maintenance; IEA.
 DR InterPro; IPR002400; GF_cysknot.
 DR InterPro; IPR000072; PD_growth_factor.
 DR Pfam; PF00341; PDGF; 1.
 DR PRINTS; PR00438; GFCYSKNOT.
 DR ProDom; PD001629; PD_growth_factor; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS0278; PDGF_2; 1.
 SQ SEQUENCE 148 AA; 17234 MW; 4AD153CA2F8B1E95 CRC64;

Query Match 81.8%; Score 45; DB 13; Length 148;
 Best Local Similarity 77.8%; Pred.No. 0.4;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 CCNDESLEC 9
 Db 86 CCNDESLEC 94

Search completed: September 5, 2004, 09:59:59
 Job time : 21.3636 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:37:49 ; Search time 29.5455 Seconds
(without alignments)
86.068 Million cell updates/sec

Title: US-09-761-636A-9

Perfect score: 55

Sequence: 1 CCNEESLIC 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A_Geneseq_29Jan04:*

- 1: geneseqp1980s:*
- 2: geneseqp1990s:*
- 3: geneseqp2000s:*
- 4: geneseqp2001s:*
- 5: geneseqp2002s:*
- 6: geneseqp2003as:*
- 7: geneseqp2003bs:*
- 8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	55	100.0	9	4 AAU04528	Aau04528 VEGF base
2	55	100.0	73	4 AAU04522	Aau04522 Human VEG
3	55	100.0	96	4 AAU04520	Aau04520 Human VEG
4	55	100.0	109	2 AAY23889	Aay23889 Human vas
5	55	100.0	109	3 AAB11931	Aab11931 Human tru
6	55	100.0	109	6 ABB84621	Abb84621 Human wil
7	55	100.0	287	6 ABG73779	Abg73779 Human NVR
8	55	100.0	325	2 AAW53240	Aaw53240 Homo sapi
9	55	100.0	325	4 AAY97572	Aay97572 Human VEG
10	55	100.0	354	2 AAW44293	Aaw44293 Human vas
11	55	100.0	354	2 AAW49036	Aaw49036 Human zve
12	55	100.0	354	2 AAW53241	Aaw53241 Homo sapi
13	55	100.0	354	3 AAB10649	Aab10649 Human VEG
14	55	100.0	354	3 AAY70750	Aay70750 Human pre
15	55	100.0	354	3 AAY70983	Aay70983 Human vas
16	55	100.0	354	3 AAB29049	Aab29049 Human VEG
17	55	100.0	354	4 AAB37606	Aab37606 Human VEG
18	55	100.0	354	4 AAY97573	Aay97573 Human VEG
19	55	100.0	354	4 AAU08441	Aau08441 Polypepti
20	55	100.0	354	5 ABG33055	Abg33055 Human vas
21	55	100.0	354	5 ABG32046	Abg32046 Human Flc
22	55	100.0	354	6 ABB84623	Abb84623 Human VEG
23	55	100.0	354	7 ADD08950	Add08950 Human VEG
24	50	90.9	9	4 AAU04552	Aau04552 VEGF base
25	50	90.9	109	6 ABG73750	Abg73750 Human VEG

ALIGNMENTS

RESULT 1

AAU04528
ID AAU04528 standard; protein; 9 AA.

XX AAU04528;

DT 26-SRP-2001 (first entry)

XX VEGF based bicyclic dimeric peptide #2.

XX Human; VEGF; vascular endothelial growth factor; angiogenesis;
KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
KW diabetes induced neovascular sequelae; rheumatoid arthritis;
KW diabetic retinopathy; chronic inflammation; cyclic.

XX Synthetic.

XX Key Location/Qualifiers

FT Disulfide-bond 1 /note= "A disulfide bond forms between residue 1 and
FT residue 1 of an identical peptide to form a dimeric
FT peptide, or between residue 1 and residue 17 of the
FT sequence appearing as AAU04527 also forming a dimeric
FT peptide"

FT Disulfide-bond 2 /note= "This bond cyclises the peptide"

XX WO200152875-A1.

XX 26-JUL-2001.

XX 18-JAN-2001; 2001WO-US001533.

XX 18-JAN-2000; 2000US-0176293P.

XX 16-MAY-2000; 2000US-0204590P.

XX (LUDW-) LUDWIG INST CANCER RES.

XX Achen MG, Hughes RA, Stackler S, Cendron A;

XX WPI; 2001-442248/47.

XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
PT from an exposed loop of a growth factor protein by oxidizing the cysteine
PT residues.

XX Claim 59; Page 32; 102pp; English.

Aau04553 VEGF base
Aaw44296 Rat vascu
Aab70685 Human vas
Aaw4994 Human c-F
Aau04525 VEGF base
Aaw86229 Poxvirus
Aaw86228 Poxvirus
Aam47933 Mouse VEG
Aaw86227 Poxvirus
Aaw86226 Poxvirus
Aar10916 Bovine va
Aar38916 Bovine VE
Aaw40305 Parapox v
Aay33434 Parapox v
Aay92776 Orf virus
Aay97574 Human VEG
Aau08466 Polypept1
Aay33443 Parapox v
Aay33435 Parapox v
Aaw86206 Poxvirus

26 49 89.1 9 4 AAU04553
27 49 89.1 326 2 AAW44296
28 48 87.3 354 4 AAB70685
29 48 87.3 620 2 AAW14994
30 46 83.6 8 4 AAU04525
31 45 81.8 101 2 AAW86229
32 45 81.8 106 2 AAW86228
33 45 81.8 110 5 AAM47933
34 45 81.8 111 2 AAW86227
35 45 81.8 116 2 AAW86226
36 45 81.8 120 2 AAR10916
37 45 81.8 120 2 AAR38916
38 45 81.8 132 2 AAW40305
39 45 81.8 132 2 AAY33434
40 45 81.8 132 3 AAY92776
41 45 81.8 132 4 AAY97574
42 45 81.8 132 4 AAU08466
43 45 81.8 133 2 AAY33443
44 45 81.8 133 2 AAY33435
45 45 81.8 133 2 AAW86206

xx The sequence represents a dimeric bicyclic peptide of the invention,
 CC whose 3-dimensional structure is modelled on the expose loop of human
 CC VEGF-D (vascular endothelial growth factor). The invention relates to a
 CC method of producing a monomeric monocyclic peptide by a measuring beta-
 CC beta carbon separation distances on opposite antiparallel strands of a
 CC peptide loop fragment from an exposed loop of a growth factor protein and
 CC cyclising the peptide by oxidising the cysteine residues. The monocyclic
 CC peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic
 CC peptides) and a cyclic peptide with at least one amino acid deleted prior
 CC to cyclisation are used to interfere with angiogenesis,
 CC neovascularisation or lymphangiogenesis in a mammal with a condition
 CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.
 CC The condition is diabetic retinopathy, psoriasis, arthropathy,
 CC hemangioma, vascularised malignant or benign tumour, post-recovery
 CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
 CC trauma, substance-induced neovascularisation of the liver, excessive
 CC hormone-related angiogenic dysfunction, diabetes induced neovascular
 CC sequelae, hypertension induced neovascular sequelae, or chronic liver
 CC infection. The peptides are also used to modulate vascular permeability
 CC in a mammal (the mammal has a condition characterised by fluid
 CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,
 CC or brain. The peptides are used to image blood vessels and lymphatic
 CC vasculature. The monomeric and bicyclic peptides are used to interfere
 CC with at least one biological activity induced by VEGF, VEGF-C or -D and
 CC are also used in combination with an anti-inflammatory agent, to treat a
 CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
 CC diabetic retinopathy

xx SQ Sequence 9 AA;

Query Match 100.0%; Score 55; DB 4; Length 9;
 Best Local Similarity 100.0%; Pred. No. 1.4e+06; Indels 0; Gaps 0;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9

Db 1 CCNEESLIC 9

RESULT 2
 AAU04522
 ID AAU04522 standard; protein; 73 AA.

xx AC AAU04522;

xx DT 26-SEP-2001 (first entry)

xx DE Human VEGF-D amino acids Vall101-Thr 173.

xx KW Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation.

xx OS Homo sapiens.

xx PN WO200152875-A1.

xx XX 26-JUL-2001.

xx PF 18-JAN-2001; 2001WO-US001533.

xx PR 18-JAN-2000; 2000US-0176293P.

xx PR 16-MAY-2000; 2000US-0204590P.

xx XX (LUDW-) LUDWIG INST CANCER RES.

xx XX Achen MG, Hughes RA, Stacker S, Cendron A;

xx XX WPI; 2001-442248/47.

xx XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
 PT

PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
 PT from an exposed loop of a growth factor protein by oxidizing the cysteine
 PT residues.

xx Example 1; Page 90-91; 102pp; English.

xx The sequence represents Human VEGF-D (vascular endothelial growth factor)
 CC amino acids Vall101-Thr 173, used together with the C-terminal 23 residues
 CC of VEGF to make a hybrid theoretical molecule for 3 dimensional
 CC modelling. The sequence is used in a method of producing a monomeric
 CC monocyclic peptide by a measuring beta-beta carbon separation distances
 CC on opposite antiparallel strands of a peptide loop fragment from an
 CC exposed loop of a growth factor protein and cyclising the peptide by
 CC oxidising the cysteine residues. The monocyclic peptides, dimeric
 CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
 CC peptide with at least one amino acid deleted prior to cyclisation are
 CC used to interfere with angiogenesis, neovascularisation or
 CC lymphangiogenesis in a mammal with a condition characterised by
 CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
 CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
 CC malignant or benign tumour, post-recovery cerebrovascular accident, post-
 CC angioplasty restenosis, head, heat or cold trauma, substance-induced
 CC neovascularisation of the liver, excessive hormone-related angiogenic
 CC dysfunction, diabetes induced neovascular sequelae, hypertension induced
 CC neovascular sequelae, or chronic liver infection. The peptides are also
 CC used to modulate vascular permeability in a mammal (the mammal has a
 CC condition characterised by fluid accumulation in peripheral limbs or in
 CC lungs, peritoneal cavity, pleura, or brain. The peptides are used to
 CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
 CC peptides are used to interfere with at least one biological activity
 CC induced by VEGF, VEGF-C or -D and are also used in combination with an
 CC anti-inflammatory agent, to treat a chronic inflammation, especially
 CC rheumatoid arthritis, psoriasis and diabetic retinopathy

xx SQ Sequence 73 AA;

Query Match 100.0%; Score 55; DB 4; Length 73;

Best Local Similarity 100.0%; Pred. No. 0.44;

Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9

Db 45 CCNEESLIC 53

RESULT 3

AAU04520

ID AAU04520 standard; protein; 96 AA.

xx AC AAU04520;

xx DT 26-SEP-2001 (first entry)

xx DE Human VEGF-D amino acids Vall101-PRO186.

xx KW Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
 KW neovascularisation; lymphangiogenesis; psoriasis; tumour;
 KW diabetes induced neovascular sequelae; rheumatoid arthritis;
 KW diabetic retinopathy; chronic inflammation.

xx OS Homo sapiens.

xx PN WO200152875-A1.

xx PD 26-JUL-2001.

xx XX 18-JAN-2001; 2001WO-US001533.

xx XX 18-JAN-2000; 2000US-0176293P.

xx XX 16-MAY-2000; 2000US-0204590P.

xx XX (LUDW-) LUDWIG INST CANCER RES.

xx

```

PI Achen MG, Hughes RA, Stacker S, Cendron A;
XX WPI; 2001-442248/47.
XX
XX Novel monomeric monocyclic peptide, used to interfere with angiogenesis,
PT or lymphangiogenesis, is produced by cyclizing a peptide loop fragment
PT from an exposed loop of a growth factor protein by oxidizing the cysteine
PT residues.
XX
XX Example 1; Page 89; 102pp; English.
XX
XX The sequence represents Human VEGF-D (vascular endothelial growth factor)
CC amino acids Val101-PRO186. The sequence is used in a method of producing
CC a monomeric monocyclic peptide by a measuring beta-beta carbon separation
CC distances on opposite antiparallel strands of a peptide loop fragment
CC from an exposed loop of a growth factor protein and cyclising the peptide
CC by oxidising the cysteine residues. The monocyclic peptides, dimeric
CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
CC peptide with at least one amino acid deleted prior to cyclisation are
CC used to interfere with angiogenesis, neovascularisation or
CC lymphangiogenesis in a mammal with a condition characterised by
CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
CC malignant or benign tumour, post-recovery cerebrovascular accident, post-
CC angioplasty restenosis, head, heat or cold trauma, substance-induced
CC neovascularisation of the liver, excessive hormone-related angiogenic
CC dysfunction, diabetes induced neovascular sequelae, hypertension induced
CC neovascular sequelae, or chronic liver infection. The peptides are also
CC used to modulate vascular permeability in a mammal (the mammal has a
CC condition characterised by fluid accumulation in peripheral limbs or in
CC lungs, peritoneal cavity, pleura, or brain. The peptides are used to
CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
CC peptides are used to interfere with at least one biological activity
CC induced by VEGF, VEGF-C or -D and are also used in combination with an
CC anti-inflammatory agent, to treat a chronic inflammation, especially
CC rheumatoid arthritis, psoriasis and diabetic retinopathy
XX
XX Sequence 96 AA;
SQ
Query Match 100.0%; Score 55; DB 4; Length 96;
Best Local Similarity 100.0%; Pred. No. 0.57;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 CCNEESLIC 9
Db 45 CCNEESLIC 53
|||||||

RESULT 4
AAAY23889
ID AAY23889 standard; protein; 109 AA.
XX
XX AAY23889;
XX
XX 21-SEP-1999 (first entry)
XX
XX Human vascular endothelial growth factor (VEGF)-D.
XX
XX Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
KW tumour; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
KW wound healing; lymphedema; scleroderma; anhydrotic ectodermal dysplasia.
XX
XX Homo sapiens.
XX
XX WO9933485-A1.
XX
XX 08-JUL-1999.
XX
XX 23-DEC-1998; 98WO-US027373.
XX
XX 24-DEC-1997; 97AU-00001131.
XX
XX 29-MAY-1998; 98US-0087392P.
XX

(LUDW-) LUDWIG INST CANCER RES.
Achen MG, Stacker SA, Alitalo K;
WPI; 1999-405368/34.
A human cell line stably expressing vascular endothelial growth factor D,
useful for treating melanomas or tumors expressing VEGF-D.
Claim 6; Page 72; 79pp; English.
The present sequence represents human vascular endothelial growth factor
(VEGF)-D. The specification describes a human cell line which stably
expresses VEGF-D, or fragments/analogs having VEGF-D biological
activity. VEGF-D antagonists, e.g. antisense nucleic acids or triplex
DNA, VEGF-D variants or antibodies (especially chimeric antibodies), are
useful for the treatment or alleviation of malignant melanomas, tumours
or psoriasis. Angiogenesis and lymphangiogenesis stimulating amounts of
VEGF-D can be administered to enhance the acceptance and/or healing of
skin grafts or to stimulate the healing of a surgical or traumatic wound
to the skin. Lymphangiogenesis stimulating amounts of VEGF-D can be used
to treat lymphedema. Endothelial proliferation stimulating amounts of
VEGF-D are used to treat scleroderma. Vascularisation stimulating amounts
of VEGF-D can be used to treat anhydrotic ectodermal dysplasia. VEGF-D
antibodies are useful for detecting tumours expressing VEGF-D. Fully-
processed VEGF-D can be used to stimulate at least one VEGF-D bioactivity
chosen from endothelial cell proliferation, migration, survival and
differentiation and lymphangiogenesis without inducing vascular
permeability
XX
XX Sequence 109 AA;
SQ
Query Match 100.0%; Score 55; DB 2; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.63;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 CCNEESLIC 9
Db 53 CCNEESLIC 61
|||||||

RESULT 5
AAB11931
ID AAB11931 standard; protein; 109 AA.
XX
XX AAB11931;
XX
XX 20-NOV-2000 (first entry)
XX
XX Human truncated VEGF-D.
XX
XX Truncated VEGF-D; vascular endothelial growth factor; human;
KW monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3;
KW vascular permeability disorder; endothelial cell proliferative disorder;
KW angiogenic disorder; lymphangiogenic disorder;
KW neovascularisation disorder; endothelial cell differentiation disorder;
KW cancer; diabetic retinopathy; psoriasis; arthropathy; pulmonary oedema;
KW detection; diagnosis; imaging; lymphatic vasculature.
XX
XX Homo sapiens.
XX
XX WO200037025-A2.
XX
XX 29-JUN-2000.
XX
XX 21-DEC-1999; 99WO-US031332.
XX
XX 21-DEC-1998; 98US-0113254P.
XX
XX 17-MAY-1999; 99US-0134556P.
XX
XX (LUDW-) LUDWIG INST CANCER RES.
Achen MG, Stacker SA;

```

XX WPI; 2000-442498/38.
 XX Novel compositions comprising antibodies reactive to vascular endothelial
 PT growth factor-D, useful for treating, e.g. angiogenesis, lymphangiogenesis
 PT and neovascularization disorders.
 XX Claim 1; Fig 1; 44pp; English.
 XX This sequence represents a 109 amino acid truncated human VEGF-D
 CC (vascular endothelial growth factor D), lacking both the N- and C-
 CC terminal regions. The invention relates to a monoclonal antibody, or
 CC fragments thereof, which is specifically reactive with the truncated
 CC human VEGF-D, and methods of preparing the antibody. The antibody of the
 CC invention interferes with the binding of VEGF-D to the VEGF receptors
 CC VEGFR-2 and VEGFR-3, but does not interfere with the binding of VEGF to
 CC these receptors and additionally is not reactive with VEGF-C. The
 CC antibody may be used to treat disorders associated with vascular
 CC permeability, endothelial cell proliferation, angiogenesis,
 CC lymphangiogenesis, neovascularisation and endothelial cell
 CC differentiation, especially cancer, diabetic retinopathy, psoriasis, and
 CC arthropathies. The antibody may also be used to treat fluid accumulation
 CC in the heart and/or lung via modulation of vascular permeability. It may
 CC additionally be used to detect VEGF-D and may be used to image lymphatic
 CC vasculature in tissue
 XX Sequence 109 AA;
 SQ Query Match 100.0%; Score 55; DB 3; Length 109;
 Best Local Similarity 100.0%; Pred. No. 0.63;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 CCNEESLIC 9
 Db 53 CCNEESLIC 61
 RESULT 6
 ABB84621
 ID ABB84621 standard; protein; 109 AA.
 XX ABB84621;
 XX 01-APR-2003 (first entry)
 XX Human wild-type VEGF-D monomer SEQ ID 3.
 XX Human; single-chain; extracellular ligand-binding domain; VEGF;
 KW vascular endothelial growth factor; VEGF type 2 receptor; KDR; Flt-4;
 KW VEGF type 3 receptor; VEGF-C; VEGF-D; signal transduction; angiogenesis;
 KW lymphangiogenesis.
 XX Homo sapiens.
 OS Homo sapiens.
 XX Key Location/Qualifiers
 FH Region 8..18
 FT /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT Region 36..49
 FT /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT Region 55..60
 FT /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 FT Misc-difference 60
 FT /note= "This residues is described as Gln in Claim 9"
 FT Region 70..86
 FT /note= "region of monomer likely to be modified by
 FT mutation as described in claim 9"
 XX WO200281520-A2.
 XX 17-OCT-2002.

XX 08-APR-2002; 2002WO-DK000233.
 XX 06-APR-2001; 2001DK-00000578.
 PR 06-APR-2001; 2001US-0282239P.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX Boesen TP, Halkier T;
 XX WPI; 2003-058505/05.
 XX Novel single-chain dimeric polypeptide for inhibiting angiogenesis, binds
 PT to extracellular ligand-binding domain of vascular endothelial growth
 PT factor type 2/type 3 receptor but does not activate the receptor.
 XX Claim 9; Page 66; 71pp; English.
 XX This invention describes a novel single-chain dimeric polypeptide which
 CC binds to extracellular ligand-binding domain of vascular endothelial
 CC growth factor (VEGF) type 2 receptor (KDR) or VEGF type 3 receptor (Flt-
 CC 4). The polypeptide of the invention comprises two receptor-binding sites
 CC of which one is capable of binding to a ligand-binding domain of the
 CC receptor and one is incapable of effectively binding to a ligand-binding
 CC domain of the receptor, and at least one monomer of the dimeric
 CC polypeptide is derived from VEGF, VEGF-C or VEGF-D, where the polypeptide
 CC is capable of binding to the receptor, but incapable of activating the
 CC receptor. The polypeptide of the invention is useful for preparing a
 CC medicament for preventing or treating a disease or condition involving
 CC increased signal transduction from, or an increased activation of a VEGF
 CC type 2 or type 3 receptor e.g. for inhibiting angiogenesis or
 CC lymphangiogenesis. This sequence represents a human single-chain VEGF-D
 CC monomer which can be modified and used in the construction of a VEGF-
 CC based KDR antagonist described in the disclosure of the invention
 XX Sequence 109 AA;
 SQ Query Match 100.0%; Score 55; DB 6; Length 109;
 Best Local Similarity 100.0%; Pred. No. 0.63;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 CCNEESLIC 9
 Db 53 CCNEESLIC 61
 RESULT 7
 ABG73779
 ID ABG73779 standard; protein; 287 AA.
 XX ABG73779;
 XX 03-APR-2003 (first entry)
 XX Human NVR protein.
 XX NVR; human; endothelial growth factor; cytostatic; cancer; angiogenesis;
 KW cell proliferation; revascularisation; amputation; vasculogenesis;
 KW transplant; brain; breast; intestine; kidney; lung; ovary; pancreas;
 KW prostate; uterus; gene therapy.
 XX Homo sapiens.
 OS Homo sapiens.
 XX Key Location/Qualifiers
 FH Misc-difference 281
 FT /note= "Encoded by TAA, an in frame stop codon which
 FT interrupts the coding region as shown in Figure 1A-B.
 FT This site is the end of the protein sequence represented
 FT in SEQ ID 1 of the sequence listing"
 FT Region 282..287
 FT /note= "Region not represented in SEQ ID 1 of the
 FT Sequence listing"
 XX

KW angiogenesis; tumour; inflammation; diabetic retinopathy; psoriasis;
 KW rheumatoid arthritis; autoimmune disease; allergy; cancer; therapy;
 KW infectious disease; neurodegeneration; VEGF-D.
 KW vascular endothelial growth factor-D; VEGF-D.
 XX
 OS Homo sapiens.
 XX
 PN WO200075163-A1.
 XX
 PD 14-DEC-2000.
 XX
 XX 01-JUN-2000; 2000WO-US014925.
 PF
 XX 03-JUN-1999; 99US-0137796P.
 PR
 XX (HUMA-) HUMAN GENOME SCI INC.
 PA
 XX Rosen CA, Ruben SM, Hu J, Cao L;
 PI WPI; 2001-071057/08.
 XX N-PSDB; AAA91006.
 DR
 XX New nucleic acid encoding angiogenic proteins, useful e.g. for promoting
 PT healing of wounds and treating peripheral arterial disease, critical limb
 PT ischemia or coronary disease.
 XX
 XX Claim 11; Page 226-227; 244pp; English.
 PS
 XX This sequence is vascular endothelial growth factor-D (VEGF-D), which is
 CC an angiogenic protein of the invention. The angiogenic proteins and the
 CC DNA sequences encoding them, are used to prevent, treat or ameliorate
 CC disease and to detect diseases, or susceptibility, by detecting mutations
 CC or the presence or amount of angiogenic protein expression. Particularly
 CC they are used to stimulate wound healing, growth of damaged bone and
 CC tissue, and for repair of vascular tissue, especially peripheral arterial
 CC disease, critical limb ischaemia or coronary disease. Antagonists of the
 CC sequences are used to inhibit angiogenesis in tumours and to treat
 CC inflammation (where associated with increased vascular permeability),
 CC diabetic retinopathy, rheumatoid arthritis or psoriasis. Agonists are
 CC also useful for stimulating (lymph)angiogenesis. The proteins are also
 CC used to identify specific binding agents (potential therapeutic agents)
 CC and to raise antibodies. The antibodies are useful as therapeutic
 CC (ant)agonists; for detection, purification and targeting of proteins for
 CC in vivo or in vitro diagnosis (including imaging) or for therapy
 CC (including when linked to e.g. a label or cytotoxin); and for
 CC immunotyping of cells, e.g. for detecting minimal residual disease or
 CC haematopoietic progenitor/stem cells. It is also contemplated that the
 CC sequences might be useful for treating a very wide range of other
 CC disorders, e.g. autoimmune diseases; allergy; cancer; infectious diseases
 CC (viral, bacterial, fungal or parasitic); neurodegeneration, also as
 CC chemotactic agents or for stimulating regeneration of the nervous system
 CC etc
 XX
 SQ Sequence 325 AA;
 Query Match 100.0%; Score 55; DB 4; Length 325;
 Best Local Similarity 100.0%; Pred. No. 1.7;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 CCNEESLIC 9
 Db 116 CCNEESLIC 124
 RESULT 10
 AAW44293
 ID AAW44293 standard; protein; 354 AA.
 XX
 AC AAW44293;
 XX
 XX 22-JUN-1998 (first entry)
 DT
 XX Human vascular endothelial growth factor D.
 DE

XX Human; vascular endothelial growth factor D; VEGF-D; gene therapy;
 KW inflammation; oedema.
 XX
 OS Homo sapiens.
 XX
 PN WO9802543-A1.
 XX
 PD 22-JAN-1998.
 XX
 XX 15-JUL-1997; 97WO-JP002456.
 PF
 XX 15-JUL-1996; 96JP-00185216.
 PR
 XX (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC.
 PA
 XX Hirata Y, Nezu J;
 PI WPI; 1998-110591/10.
 XX N-PSDB; AAV15156.
 DR
 XX VEGF-D protein encoded by DNA - useful for, e.g. gene therapy and
 PT treating oedema.
 FT
 XX Claim 1; Page 18-20; 52pp; Japanese.
 PS
 XX The present sequence represents human vascular endothelial growth factor
 CC D (VEGF-D). The VEGF-D protein, compounds and antibodies, which can bind
 CC the protein, may be useful in, e.g. gene therapy and in treatment of
 CC inflammation and oedema. Vectors, containing the VEGF-D DNA, and VEGF-D
 CC DNA sequences may be used for screening for the compounds which bind to
 CC the VEGF-D protein
 XX
 SQ Sequence 354 AA;
 Query Match 100.0%; Score 55; DB 2; Length 354;
 Best Local Similarity 100.0%; Pred. No. 1.8;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 CCNEESLIC 9
 Db 145 CCNEESLIC 153
 RESULT 11
 AAW49036
 ID AAW49036 standard; protein; 354 AA.
 XX
 AC AAW49036;
 XX
 XX 26-OCT-1998 (first entry)
 DT
 XX Human zveg2 growth factor.
 DE
 XX Human zveg2 growth factor; mitogen; fibroblast; smooth muscle cell;
 KW venous stasis ulcer; diabetic ulcer; skin wound; chemotactic effect;
 KW angiogenic effect; tumour; diabetic retinopathy; psoriasis; arthritis;
 KW scleroderma.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Peptide 1..23
 FT Peptide /note= "Signal peptide"
 FT Peptide 24..108
 FT Binding-site /note= "Pro-region"
 FT Binding-site 109..197
 FT Region /note= "Receptor binding domain"
 FT Region 206..256
 FT Region /note= "Cysteine-rich domain"
 FT Region 257..274
 FT Region /note= "Balbiani ring motif"
 FT Region 275..294

KW tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;
 KW venous sore; diabetic ulcer; burns; skin graft growth; VEGD.
 XX Homo sapiens.
 XX WO200037641-A2.
 XX 29-JUN-2000.
 XX 21-DEC-1999; 99WO-US030503.
 XX 22-DEC-1998; 98GB-00028377.
 PR 18-MAR-1999; 99US-0124967P.
 PR 08-NOV-1999; 99US-0164131P.
 XX (JANC) JANSSEN PHARM NV.
 XX Gordon RD, Sprengel JU, Yon JR, Dijkmans JUH, Gosiewska A;
 PI Dhanaraj SN, Xu J;
 XX WPI; 2000-442669/38.
 XX New vascular endothelial growth factor protein, useful for treating or
 PT preventing diseases associated with inappropriate angiogenesis activity
 PT such as cancer, rheumatoid arthritis, psoriasis and wounds.
 XX Disclosure; Fig 11; 127pp; English.
 XX This invention describes a novel vascular endothelial growth factor-X
 CC (VEGF-X) protein (Ia) and its encoding polynucleotide (Iia) which has
 CC vulnary, cytostatic, antirheumatic, antiarthritic, antipsoriatic and
 CC antidiabetic activity and acts as an angiogenesis and vascularization
 CC regulator. An antisense molecule of the invention is useful for treating
 CC or preventing cancer, rheumatoid arthritis, psoriasis and diabetic
 CC retinopathy by inhibiting angiogenic activity or inappropriate
 CC vascularization including formation and proliferation of new blood
 CC vessels, growth and development of tissues, tissue regeneration and organ
 CC and tissue repair in a subject. The products of the invention are useful
 CC for preparing medicaments for treating wounds such as dermal ulcers,
 CC pressure sores, venous sores, diabetic ulcers and burns and to promote
 CC skin graft growth, tissue repair, proliferation of new blood vessels,
 CC tissue regeneration and organ repair by promoting angiogenic activity or
 CC vascularization. This sequence represents the human VEGD protein used to
 CC illustrate the method of the invention
 XX
 SQ Sequence 354 AA;
 Query Match 100.0%; Score 55; DB 3; Length 354;
 Best Local Similarity 100.0%; Pred. No. 1.8;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CCNEESLIC 9
 Db 145 CCNEESLIC 153
 RESULT 14
 AAY70750
 ID AAY70750 standard; protein; 354 AA.
 XX
 AC AAY70750;
 XX
 DT 17-AUG-2000 (first entry)
 XX
 DE Human prepro-vascular endothelial growth factor D.
 XX
 KW Human; receptor tyrosine kinase; RTK; Flt4; fms-like tyrosine kinase 4;
 KW VEGFR-3; vascular endothelial growth factor receptor-3; chromosome 5q35;
 KW cytosolic; tumour imaging; anti-tumour therapy; treatment; diagnosis;
 KW neoplastic disease; lymphoma; carcinoma; breast; squamous cell; melanoma;
 KW sarcoma; malignancy; VEGF-D; vascular endothelial growth factor D.
 XX Homo sapiens.
 OS

XX WO200021560-A1.
 XX 20-APR-2000.
 XX 08-OCT-1999; 99WO-US023525.
 XX 09-OCT-1998; 98US-00169079.
 XX (LUDW-) LUDWIG INST CANCER RES.
 XX (UYHE-) UNIV HELSINKI LICENSING LTD OY.
 XX Alitalo K, Kaipainen A, Valtola R, Jussila L;
 XX WPI; 2000-317850/27.
 XX Treating neoplastic diseases such as lymphoma, carcinomas, melanomas and
 PT sarcomas, involves administering a compound capable of inhibiting binding
 PT of ligand proteins to fms-like tyrosine kinase-1 receptor.
 XX Example 15-17; Page 142-143; 148pp; English.
 XX The patent discloses a method to treat neoplastic disease characterised
 CC by expression of fms-like tyrosine kinase 4 (flt4) receptor (also
 CC referred as vascular endothelial growth factor receptor-3, VEGFR-3) in
 CC endothelial cells of blood vessels adjacent to malignant neoplasm. The
 CC method involves administering a compound that inhibits binding of a
 CC ligand to Flt4 thereby inhibiting Flt4 mediated proliferation of vascular
 CC endothelial cells. The compound is useful for treating neoplastic disease
 CC such as breast carcinomas, squamous cell carcinomas, lymphomas, melanomas
 CC and sarcomas. Flt4 receptor tyrosine kinase binding compounds can be used
 CC for manufacturing medicament useful for diagnostic screening, imaging and
 CC treatment of malignancies characterised by Flt4-expressing blood cells.
 CC The Flt4 gene maps to chromosomal region 5q35 and is expressed as 5.8 kb
 CC and 4.5 kb mRNAs which differ in their 3' sequences and are
 CC differentially expressed in HEL and DAMI cell lines. Flt4 belongs to a
 CC subfamily of class III receptor tyrosine kinases (RTKs). It is used as a
 CC target for tumour imaging and anti-tumour therapy. The present sequence
 CC is a human prepro-vascular endothelial growth factor D (VEGF-D), a
 CC specific example of Flt4 binding compound. A recombinantly matured VEGF-D
 CC lacking residues 1-92 and 202-354 retains the ability to activate VEGFR-2
 CC and VEGFR-3 receptors and associate as non-covalently linked dimers
 XX
 SQ Sequence 354 AA;
 Query Match 100.0%; Score 55; DB 3; Length 354;
 Best Local Similarity 100.0%; Pred. No. 1.8;
 Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 CCNEESLIC 9
 Db 145 CCNEESLIC 153
 RESULT 15
 AAY70983
 ID AAY70983 standard; protein; 354 AA.
 XX
 AC AAY70983;
 XX
 DT 09-AUG-2000 (first entry)
 XX
 DE Human vascular endothelial growth factor (VEGF)-D protein.
 XX
 KW Vascular endothelial growth factor-D; VEGF; human; re-endothelialisation;
 KW vascular endothelial growth factor receptor; VEGFR; vascular trauma;
 KW blood vessel; cardiovascular surgery; anti-restenosis agent; prevention;
 KW restenosis; stenosis; percutaneous transluminal coronary angioplasty.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Peptide 1. .21

```

FT /label= Signal peptide
FT /note= "Cleavage results in partially-processed VEGF-D
FT protein"
FT 22..92
FT Peptide
FT /label= Amino terminal peptide
FT /note= "Cleavage results in fully-processed mature VEGF-D
FT protein"
FT 93..201
FT Protein
FT /label= Recombinantly matured VEGF_D protein
FT /note= "Processed vascular epithelial growth factor-D"
FT 202..354
FT Peptide
FT /label= Carboxy terminal peptide
FT /note= "Cleavage results in partially-processed VEGF-D
FT protein"
FT
XX
PN WO200024412-A2.
XX
XX 04-MAY-2000.
XX
XX 26-OCT-1999; 99WO-US024054.
XX
XX 26-OCT-1998; 98US-0105587P.
XX
XX (LUDW-) LUDWIG INST CANCER RES.
PA (UYHE-) UNIV HELSINKI LICENSING LTD OY.
PA (YLAH/) YLA-HERTTUALA S.
XX
PI Yla-Herttuala S, Alitalo K, Hiltunen MO, Jeltsch MM, Achen MG;
XX WPI; 2000-350584/30.
DR N-PSDB; AAD00340.
XX
PT Preventing stenosis and restenosis in mammals using vascular endothelial
PT growth factor proteins or the nucleic acids encoding them.
XX
XX Disclosure; Page 53-55; 61pp; English.
XX
CC The present amino acid sequence is the complete human prepro-vascular
CC endothelial growth factor (VEGF)-D. VEGF-D has the ability to stimulate
CC re-endothelialisation of an injured blood vessel, without significant
CC stimulation of smooth muscle cell proliferation. It can bind to and
CC stimulate VEGFR-2 (vascular endothelial growth factor receptor) and/or
CC VEGFR-3 phosphorylation in cells that express such receptors. An anti-
CC restenosis agent comprising either a VEGF-D gene or protein is used in a
CC method to reduce or prevent restenosis and stenosis of a blood vessel
CC following vascular trauma e.g., cardiovascular surgery and percutaneous
CC transluminal coronary angioplasty
XX
SQ Sequence 354 AA;
Query Match 100.0%; Score 55; DB 3; Length 354;
Best Local Similarity 100.0%; Pred. No. 1.8;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 CCNEESLIC 9
Db 145 CCNEESLIC 153

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Search completed: September 5, 2004, 09:55:11
 Job time : 29.5455 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 5, 2004, 10:00:15 ; Search time 25,2727 Seconds
(without alignments)
112.199 Million cell updates/sec

Title: US-09-761-636A-9
Perfect score: 55
Sequence: 1 CCNEESLIC 9

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1298764 seqs, 315065143 residues

Total number of hits satisfying chosen parameters: 1298764

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:*

1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep.*
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3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
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8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep.*
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11: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep.*
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13: /cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep.*
14: /cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep.*
15: /cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep.*
16: /cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep.*
17: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep.*
18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	55	100.0	9	US-09-761-636A-9	Sequence 9, Appli
2	55	100.0	73	US-09-761-636A-3	Sequence 3, Appli
3	55	100.0	96	US-09-761-636A-1	Sequence 1, Appli
4	55	100.0	109	US-09-956-095-3	Sequence 3, Appli
5	55	100.0	109	US-09-219-345A-1	Sequence 1, Appli
6	55	100.0	109	US-10-779-731-1	Sequence 1, Appli
7	55	100.0	197	US-10-352-153-8	Sequence 8, Appli
8	55	100.0	280	US-10-044-622-1	Sequence 1, Appli
9	55	100.0	325	US-10-274-953-3	Sequence 3, Appli
10	55	100.0	325	US-10-161-694-3	Sequence 3, Appli
11	55	100.0	354	US-09-956-095-2	Sequence 2, Appli
12	55	100.0	354	US-09-219-345A-11	Sequence 11, Appli
13	55	100.0	354	US-09-795-006A-119	Sequence 119, App
14	55	100.0	354	US-09-375-248-6	Sequence 6, Appli
15	55	100.0	354	US-09-765-534B-22	Sequence 22, Appli

16	55	100.0	354	12	US-10-661-740-6	Sequence 6, Appli
17	55	100.0	354	14	US-10-262-538-26	Sequence 26, Appli
18	55	100.0	354	14	US-10-274-953-5	Sequence 5, Appli
19	55	100.0	354	14	US-10-161-694-5	Sequence 5, Appli
20	50	90.9	9	9	US-09-761-636A-33	Sequence 33, Appli
21	49	89.1	9	9	US-09-761-636A-34	Sequence 34, Appli
22	48	87.3	354	14	US-10-174-930-1	Sequence 1, Appli
23	48	87.3	362	13	US-10-139-876-4	Sequence 4, Appli
24	46	83.6	8	9	US-09-761-636A-6	Sequence 6, Appli
25	45	81.8	81	13	US-10-086-623-18	Sequence 18, Appli
26	45	81.8	81	14	US-10-260-539-18	Sequence 18, Appli
27	45	81.8	110	10	US-09-847-524-6	Sequence 6, Appli
28	45	81.8	132	9	US-09-795-006A-151	Sequence 151, App
29	45	81.8	132	12	US-10-352-153-11	Sequence 11, Appli
30	45	81.8	133	9	US-09-852-209A-11	Sequence 11, Appli
31	45	81.8	133	12	US-10-439-337A-11	Sequence 11, Appli
32	45	81.8	133	12	US-10-303-997B-11	Sequence 11, Appli
33	45	81.8	133	12	US-10-352-153-2	Sequence 2, Appli
34	45	81.8	133	14	US-10-131-600-11	Sequence 11, Appli
35	45	81.8	190	14	US-10-177-485-4	Sequence 4, Appli
36	45	81.8	190	14	US-10-155-492-4	Sequence 4, Appli
37	45	81.8	321	10	US-09-847-524-4	Sequence 4, Appli
38	45	81.8	321	14	US-10-274-953-9	Sequence 9, Appli
39	45	81.8	321	14	US-10-161-694-9	Sequence 9, Appli
40	45	81.8	358	9	US-09-852-209A-13	Sequence 13, Appli
41	45	81.8	358	10	US-09-847-524-2	Sequence 2, Appli
42	45	81.8	358	12	US-10-439-337A-13	Sequence 13, Appli
43	45	81.8	358	12	US-10-303-997B-13	Sequence 13, Appli
44	45	81.8	358	13	US-10-139-876-2	Sequence 2, Appli
45	45	81.8	358	14	US-10-131-600-13	Sequence 13, Appli

ALIGNMENTS

RESULT 1
US-09-761-636A-9
; Sequence 9, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: Patent in version 3.0
; SEQ ID NO 9
; LENGTH: 9
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-761-636A-9

Query Match 100.0%; Score 55; DB 9; Length 9;
Best Local Similarity 100.0%; Pred. No. 1.2e+06;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 1 CCNEESLIC 9

RESULT 2
US-09-761-636A-3
; Sequence 3, Application US/09761636A
; Patent No. US20020065218A1

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; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 3
; LENGTH: 73
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues Val101-Thr173 of VEGF-D
US-09-761-636A-3

Query Match      100.0%; Score 55; DB 9; Length 73;
Best Local Similarity 100.0%; Pred. No. 0.2; Mismatches 0; Indels 0; Gaps 0;
Matches 9; Conservative 0;

Qy      1 CCNEESLIC 9
Db      45 CCNEESLIC 53

RESULT 3
US-09-761-636A-1
; Sequence 1, Application US/09761636A
; Patent No. US20020065218A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; APPLICANT: STACKER, Steven
; APPLICANT: HUGHES, Richard
; APPLICANT: CENDRON, Angela
; TITLE OF INVENTION: VEGF-D/VEGF-C/VEGF PEPTIDOMIMETIC INHIBITOR
; FILE REFERENCE: 1064/48505 Achen et al
; CURRENT APPLICATION NUMBER: US/09/761,636A
; CURRENT FILING DATE: 2001-01-18
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/176,293
; PRIOR FILING DATE: 2000-01-18
; PRIOR APPLICATION NUMBER: US 60/204,590
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 96
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Amino acid residues of Val101-Pro196 of VEGF-D
US-09-761-636A-1

Query Match      100.0%; Score 55; DB 9; Length 96;
Best Local Similarity 100.0%; Pred. No. 0.25; Mismatches 0; Indels 0; Gaps 0;
Matches 9; Conservative 0;

Qy      1 CCNEESLIC 9
Db      45 CCNEESLIC 53

RESULT 4
US-09-956-095-3
; Sequence 3, Application US/09956095
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; Patent No. US20020102260A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steven A.
; TITLE OF INVENTION: METHODS FOR TREATING NEOPLASTIC DISEASE CHARACTERIZED BY
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR D EXPRESSION, FOR SCREENING
; TITLE OF INVENTION: FOR NEOPLASTIC DISEASE OR METASTATIC RISK AND FOR MAINTAINING
; TITLE OF INVENTION: VASCULARIZATION OF TISSUE
; FILE REFERENCE: 1064/48666PC
; CURRENT APPLICATION NUMBER: US/09/956,095
; CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 09/796,714
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/234,196
; PRIOR FILING DATE: 2000-09-20
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
; OTHER INFORMATION: US-09-956-095-3

Query Match      100.0%; Score 55; DB 9; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.29; Mismatches 0; Indels 0; Gaps 0;
Matches 9; Conservative 0;

Qy      1 CCNEESLIC 9
Db      53 CCNEESLIC 61

RESULT 5
US-09-219-345A-1
; Sequence 1, Application US/09219345A
; Patent No. US20020127222A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; TITLE OF INVENTION: EXPRESSION VECTORS AND CELL LINES EXPRESSING VASCULAR
; TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR D, AND METHOD OF TREATING
; TITLE OF INVENTION: MELANOMAS
; FILE REFERENCE: 1064/44385 Marc ACHEN
; CURRENT APPLICATION NUMBER: US/09/219,345A
; CURRENT FILING DATE: 1998-12-23
; PRIOR APPLICATION NUMBER: AU PP 1131
; PRIOR FILING DATE: 1997-12-24
; PRIOR APPLICATION NUMBER: US 60/087,392
; PRIOR FILING DATE: 1998-05-29
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
; OTHER INFORMATION: US-09-219-345A-1

Query Match      100.0%; Score 55; DB 9; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.29; Mismatches 0; Indels 0; Gaps 0;
Matches 9; Conservative 0;

Qy      1 CCNEESLIC 9
Db      53 CCNEESLIC 61

RESULT 6
US-10-779-731-1
; Sequence 1, Application US/10779731
; Publication No. US20040141917A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steve A.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
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; FILE REFERENCE: ACHEN et al-1064-44660
; CURRENT APPLICATION NUMBER: US/10/779,731
; PRIOR FILING DATE: 2004-02-18
; PRIOR APPLICATION NUMBER: US/10/100,037
; PRIOR FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: 09/469,186
; PRIOR FILING DATE: 1999-12-21
; PRIOR APPLICATION NUMBER: 60/113,254
; PRIOR FILING DATE: 1998-12-21
; PRIOR APPLICATION NUMBER: 60/134,556
; PRIOR FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-779-731-1

Query Match      100.0%; Score 55; DB 16; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CCNEESLIC 9
Db      53 CCNEESLIC 61

RESULT 7
US-10-352-153-8
; Sequence 8, Application US/10352153
; Publication No. US20030211101A1
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stacker, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N22 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; CURRENT APPLICATION NUMBER: US/10/352,153
; CURRENT FILING DATE: 2003-01-28
; PRIOR APPLICATION NUMBER: US/09/431,888A
; PRIOR FILING DATE: 1999-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,689
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-02
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/106,800
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-352-153-8

Query Match      100.0%; Score 55; DB 12; Length 197;
Best Local Similarity 100.0%; Pred. No. 0.5;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CCNEESLIC 9
Db      69 CCNEESLIC 77

RESULT 8
US-10-044-622-1
; Sequence 1, Application US/10044622
; Publication No. US2002015538A1
; GENERAL INFORMATION:
; APPLICANT: Bandman, Olga

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; Goli, Surya K.
; Murry, Lynn E.
; TITLE OF INVENTION: NOVEL ENDOTHELIAL GROWTH
; FACTOR
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: PastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/044,622
; FILING DATE: 09-Jan-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/788,812
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Billings, Lucy J.
; REGISTRATION NUMBER: 36,749
; REFERENCE/DOCKET NUMBER: PF-0185 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-845-4166
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 280 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; IMMEDIATE SOURCE:
; LIBRARY: LUNGAST01
; CLONE: 873352
; SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-10-044-622-1

Query Match      100.0%; Score 55; DB 13; Length 280;
Best Local Similarity 100.0%; Pred. No. 0.7;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 CCNEESLIC 9
Db      145 CCNEESLIC 153

RESULT 9
US-10-274-953-3
; Sequence 3, Application US/10274953
; Publication No. US20030114658A1
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible

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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/274,953
FILING DATE: 22-oct-2002
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/296,275
FILING DATE:
APPLICATION NUMBER: 08/915,795
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ORIGINAL SOURCE:
TISSUE TYPE: Human Breast
US-10-274-953-3

Query Match 100.0%; Score 55; DB 14; Length 325;
Best Local Similarity 100.0%; Pred. No. 0.81;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
Db 116 CCNEESLIC 124

RESULT 10
US-10-161-694-3
; Sequence 3, Application US/10161694
; Publication No. US20030125537A1
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; Andrew F. WILKS
; Steven A. STACKER
; Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/161,694
; FILING DATE: 05-Jun-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/296,275
; FILING DATE: <Unknown>
; APPLICATION NUMBER: 08/915,795
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:

NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ORIGINAL SOURCE:
TISSUE TYPE: Human Breast
US-10-161-694-3

Query Match 100.0%; Score 55; DB 14; Length 325;
Best Local Similarity 100.0%; Pred. No. 0.81;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
Db 116 CCNEESLIC 124

RESULT 11
US-09-956-095-2
; Sequence 2, Application US/09956095
; Patent No. US20020102260A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; TITLE OF INVENTION: METHODS FOR TREATING NEOPLASTIC DISEASE CHARACTERIZED BY
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR D EXPRESSION, FOR SCREENING
; TITLE OF INVENTION: FOR NEOPLASTIC DISEASE OR METASTATIC RISK AND FOR MAINTAINING
; TITLE OF INVENTION: VASCULARIZATION OF TISSUE
; FILE REFERENCE: 1064/48666PC
; CURRENT APPLICATION NUMBER: US/09/956,095
; CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 09/796,714
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/234,196
; PRIOR FILING DATE: 2000-09-20
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-956-095-2

Query Match 100.0%; Score 55; DB 9; Length 354;
Best Local Similarity 100.0%; Pred. No. 0.89;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CCNEESLIC 9
Db 145 CCNEESLIC 153

RESULT 12
US-09-219-345A-11
; Sequence 11, Application US/09219345A
; Patent No. US20020127222A1
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc
; TITLE OF INVENTION: EXPRESSION VECTORS AND CELL LINES EXPRESSING VASCULAR
; TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR D, AND METHOD OF TREATING
; TITLE OF INVENTION: MELANOMAS

; FILE REFERENCE: 1064/44385 Marc ACHEN
; CURRENT APPLICATION NUMBER: US/09/219,345A
; PRIOR FILING DATE: 1998-12-23
; PRIOR APPLICATION NUMBER: AU PP 1131
; PRIOR FILING DATE: 1997-12-24
; PRIOR APPLICATION NUMBER: US 60/087,392
; PRIOR FILING DATE: 1998-05-29
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-219-345A-11

Query Match 100.0%; Score 55; DB 9; Length 354;
Best Local Similarity 100.0%; Pred. No. 0.88;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 145 CCNEESLIC 153

RESULT 13

US-09-795-006A-119
; Sequence 119, Application US/09795006A
; Patent No. US20020151680A1
; GENERAL INFORMATION:
; APPLICANT: Alitalo et al
; TITLE OF INVENTION: MATERIALS AND METHODS INVOLVING HYBRID VASCULAR
; FILE REFERENCE: 28967/35977B
; CURRENT APPLICATION NUMBER: US/09/795,006A
; CURRENT FILING DATE: 2001-02-26
; PRIOR APPLICATION NUMBER: US 60/205,331
; PRIOR FILING DATE: 2000-05-18
; PRIOR APPLICATION NUMBER: US 60/185,205
; PRIOR FILING DATE: 2000-02-25
; NUMBER OF SEQ ID NOS: 175
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 119
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-006A-119

Query Match 100.0%; Score 55; DB 9; Length 354;
Best Local Similarity 100.0%; Pred. No. 0.88;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 145 CCNEESLIC 153

RESULT 14

US-09-375-248-6
; Sequence 6, Application US/09375248
; Publication No. US20030026759A1
; GENERAL INFORMATION:
; APPLICANT: Ferrell, Robert E.
; APPLICANT: Alitalo, Kari
; APPLICANT: Finegold, David N.
; APPLICANT: Karkkainen, Marika
; TITLE OF INVENTION: SCREENING AND THERAPY FOR LYMPHATIC DISORDERS INVOLVING
; FILE REFERENCE: 28967/35255A
; CURRENT APPLICATION NUMBER: US/09/375,248
; CURRENT FILING DATE: 1999-08-16
; EARLIER APPLICATION NUMBER: PCT/US99/06133
; EARLIER FILING DATE: 1999-03-26
; NUMBER OF SEQ ID NOS: 28

; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-375-248-6

Query Match 100.0%; Score 55; DB 10; Length 354;
Best Local Similarity 100.0%; Pred. No. 0.88;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 145 CCNEESLIC 153

RESULT 15

US-09-765-534B-22
; Sequence 22, Application US/09765534B
; Publication No. US20040037820A1
; GENERAL INFORMATION:
; APPLICANT: Alitalo, Kari
; APPLICANT: Kaipainen, Arja
; APPLICANT: Valtola, Reija
; APPLICANT: Jussila, Lotta
; TITLE OF INVENTION: Flt4 (VEGFR-3) as a Target for Tumor Imaging and Anti-Tumor Thera
; FILE REFERENCE: 28113/34891
; CURRENT APPLICATION NUMBER: US/09/765,534B
; CURRENT FILING DATE: 2001-01-19
; PRIOR APPLICATION NUMBER: 08/901,710
; PRIOR FILING DATE: 1997-07-28
; PRIOR APPLICATION NUMBER: 08/340,011
; PRIOR FILING DATE: 1994-11-14
; PRIOR APPLICATION NUMBER: 08/257,754
; PRIOR FILING DATE: 1994-07-09
; PRIOR APPLICATION NUMBER: 07/959,951
; PRIOR FILING DATE: 1992-10-09
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 354
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-765-534B-22

Query Match 100.0%; Score 55; DB 12; Length 354;
Best Local Similarity 100.0%; Pred. No. 0.88;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 145 CCNEESLIC 153

Search completed: September 5, 2004, 10:29:19
Job time : 26.2727 secs

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OM protein - protein search, using sw model

Run on: September 5, 2004, 09:55:30 ; Search time 8 Seconds
(without alignments)
58.079 Million cell updates/sec

Title: US-09-761-636A-9

Perfect score: 55

Sequence: 1 CCNEESLIC 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:*

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6: /cgn2_6/ptodata/2/iaa/backfiles1.pcp.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	55	100.0	109	4	US-09-469-186-1
2	55	100.0	109	4	US-09-469-185-1
3	55	100.0	197	4	US-09-431-888-8
4	55	100.0	325	3	US-08-915-795-3
5	55	100.0	354	3	US-08-915-795-5
6	45	81.8	120	6	5194596-9
7	45	81.8	120	6	5219733-9
8	45	81.8	132	4	US-09-125-642C-15
9	45	81.8	132	4	US-09-431-888-11
10	45	81.8	133	4	US-09-431-888-2
11	45	81.8	164	6	5194596-17
12	45	81.8	164	6	5219733-17
13	45	81.8	164	6	5219733-18
14	45	81.8	190	6	5332671-3
15	45	81.8	321	3	US-08-915-795-9
16	45	81.8	358	3	US-08-915-795-8
17	42	76.4	146	3	US-08-586-039B-33
18	42	76.4	146	4	US-09-699-769-33
19	42	76.4	189	1	US-08-469-427A-15
20	42	76.4	190	2	US-08-569-063C-20
21	42	76.4	190	3	US-08-586-039B-31
22	42	76.4	190	4	US-09-699-769-31
23	42	76.4	214	3	US-08-586-039B-35
24	42	76.4	214	4	US-09-699-769-35
25	41	74.5	12	3	US-08-742-243-43
26	41	74.5	12	3	US-08-742-243-44
27	41	74.5	65	4	US-09-244-583-12

28 41 74.5 109 3 US-08-691-794-3 Sequence 3, Appli
29 41 74.5 110 4 US-09-392-332-11 Sequence 11, Appl
30 41 74.5 110 4 US-09-574-708A-11 Sequence 11, Appl
31 41 74.5 110 4 US-09-822-270-17 Sequence 17, Appl
32 41 74.5 110 4 US-09-392-931-10 Sequence 10, Appl
33 41 74.5 110 4 US-09-392-931-11 Sequence 11, Appl
34 41 74.5 121 6 5194596-19 Patent No. 5194596
35 41 74.5 121 6 5219733-20 Patent No. 5219733
36 41 74.5 136 4 US-09-037-983C-15 Sequence 15, Appl
37 41 74.5 137 4 US-09-037-983C-17 Sequence 17, Appl
38 41 74.5 138 4 US-09-037-983C-16 Sequence 16, Appl
39 41 74.5 141 4 US-09-519-476-2 Sequence 2, Appli
40 41 74.5 145 3 US-08-784-551C-2 Sequence 2, Appli
41 41 74.5 145 4 US-09-392-932-2 Sequence 2, Appli
42 41 74.5 145 4 US-09-574-708A-4 Sequence 4, Appli
43 41 74.5 145 4 US-09-037-983C-2 Sequence 2, Appli
44 41 74.5 145 4 US-09-428-909A-2 Sequence 2, Appli
45 41 74.5 145 4 US-09-392-931-4 Sequence 4, Appli

ALIGNMENTS

RESULT 1

US-09-469-186-1
; Sequence 1, Application US/09469186
; Patent No. 6383484
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steve A.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al 1064-44660
; CURRENT APPLICATION NUMBER: US/09/469,186
; EARLIER FILING DATE: 1999-12-21
; EARLIER APPLICATION NUMBER: 60/113,254
; EARLIER FILING DATE: 1998-12-21
; EARLIER APPLICATION NUMBER: 60/134,556
; EARLIER FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-469-186-1

Query Match 100.0%; Score 55; DB 4; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.15; 0; Indels 0; Gaps 0;
Matches 9; Conservative 0; Mismatches 0;

QY 1 CCNEESLIC 9
DB 53 CCNEESLIC 61

RESULT 2

US-09-469-185-1
; Sequence 1, Application US/09469185
; Patent No. 6531185
; GENERAL INFORMATION:
; APPLICANT: ACHEN, Marc G.
; APPLICANT: STACKER, Steve A.
; TITLE OF INVENTION: ANTIBODIES TO TRUNCATED VEGF-D AND USES THEREOF
; FILE REFERENCE: ACHEN et al 1064-44660
; CURRENT APPLICATION NUMBER: US/09/469,185
; EARLIER FILING DATE: 1999-12-21
; EARLIER APPLICATION NUMBER: 60/113,254
; EARLIER FILING DATE: 1998-12-21
; EARLIER APPLICATION NUMBER: 60/134,556
; EARLIER FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1

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; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-469-185-1

Query Match 100.0%; Score 55; DB 4; Length 109;
Best Local Similarity 100.0%; Pred. No. 0.15;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 53 CCNEESLIC 61

RESULT 3
US-09-431-888-8
; Sequence 8, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stackner, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N22 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431,888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800
; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 197
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-431-888-8

Query Match 100.0%; Score 55; DB 4; Length 197;
Best Local Similarity 100.0%; Pred. No. 0.25;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 69 CCNEESLIC 77

RESULT 4
US-08-915-795-3
; Sequence 3, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA: US/08/915,795
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 354 amino acids
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 325 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: Human Breast
US-08-915-795-3

Query Match 100.0%; Score 55; DB 3; Length 325;
Best Local Similarity 100.0%; Pred. No. 0.4;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 116 CCNEESLIC 124

RESULT 5
US-08-915-795-5
; Sequence 5, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA: US/08/915,795
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 354 amino acids
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; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; TISSUE TYPE: Human Lung
US-08-915-795-5

Query Match 100.0%; Score 55; DB 3; Length 354;
Best Local Similarity 100.0%; Pred. No. 0.43;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 145 CCNEESLIC 153

RESULT 6

5194596-9
; Patent No. 5194596
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN
; C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
; GROWTH FACTOR
; NUMBER OF SEQUENCES: 32
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/450,883
; FILING DATE: 14-DEC-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO: 9:
; LENGTH: 120
5194596-9

Query Match 81.8%; Score 45; DB 6; Length 120;
Best Local Similarity 77.8%; Pred. No. 4.9;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 59 CCNEESLIC 67

RESULT 7

5219739-9
; Patent No. 5219739
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
; JOHN C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: DNA SEQUENCES ENCODING BVGEF120 AND
; BVGEF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN
; VASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVGEF120 AND BVGEF121
; NUMBER OF SEQUENCES: 40
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/559,041
; FILING DATE: 27-JUL-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 450,883
; FILING DATE: 14-DEC-1989
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO: 9:
; LENGTH: 120
5219739-9

Query Match 81.8%; Score 45; DB 6; Length 120;
Best Local Similarity 77.8%; Pred. No. 4.9;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 59 CCNEESLIC 67

RESULT 8

US-09-125-642C-15
; Sequence 15, Application US/09125642C
; Patent No. 6365393
; GENERAL INFORMATION:
; APPLICANT: BAYER AG
; TITLE OF INVENTION: Parapoxviruses Which Contain Foreign DNA, and
; Their Production and Their Use in Vaccines
; NUMBER OF SEQUENCES: 18
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bayer Corporation
; STREET: 100 Bayer Road
; CITY: Pittsburgh
; STATE: Pennsylvania
; COUNTRY: U.S.A.
; ZIP: 15205-9741
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30 (EPO)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/125,642C
; FILING DATE: 20-Aug-1998
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/EP97/00729,
; FILING DATE: 17-Feb-97
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 132 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Parapox ovis
; STRAIN: D1701 VEGF- Protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 15:
US-09-125-642C-15

Query Match 81.8%; Score 45; DB 4; Length 132;
Best Local Similarity 77.8%; Pred. No. 5.3;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 69 CCNEESLIC 77

RESULT 9

US-09-431-888-11
; Sequence 11, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stacker, Stephen
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N22 BINDS AND ACTIVATES MAMMALIAN VEGF
; TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
; FILE REFERENCE: Sequence Listing for 09/431,833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431,888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800

; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 132
; TYPE: PRT
; ORGANISM: Orf virus
US-09-431-888-11

Query Match 81.8%; Score 45; DB 4; Length 132;
Best Local Similarity 77.8%; Pred. No. 5.3;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
| | | : | | | |
Db 69 CCNDESLEC 77

RESULT 10
US-09-431-888-2
; Sequence 2, Application US/09431888A
; Patent No. 6541008
; GENERAL INFORMATION:
; APPLICANT: Wise, Lyn M
; APPLICANT: Mercer, Andrew A
; APPLICANT: Savory, Loreen J
; APPLICANT: Fleming, Stephen B
; APPLICANT: Stacker, Stephen
; TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF
; TITLE OF INVENTION: VIRUS N22 BINDS AND ACTIVATES MAMMALIAN VEGF
; FILE REFERENCES: Sequence Listing for 09/431,833
; Patent No. 6541008
; CURRENT APPLICATION NUMBER: US/09/431,888A
; CURRENT FILING DATE: 1999-11-02
; EARLIER APPLICATION NUMBER: 60/106,689
; EARLIER FILING DATE: 1998-11-02
; EARLIER APPLICATION NUMBER: 60/106,800
; EARLIER FILING DATE: 1998-11-03
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 133
; TYPE: PRT
; ORGANISM: Orf virus
US-09-431-888-2

Query Match 81.8%; Score 45; DB 4; Length 133;
Best Local Similarity 77.8%; Pred. No. 5.3;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
| | | : | | | |
Db 70 CCNDESLEC 78

RESULT 11
5194596-17
; Patent No. 5194596
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN
; C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
; GROWTH FACTOR
; NUMBER OF SEQUENCES: 32
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/450,883
; FILING DATE: 14-DEC-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO:17:
; LENGTH: 164
5194596-17

Query Match 81.8%; Score 45; DB 6; Length 164;
Best Local Similarity 77.8%; Pred. No. 6.4;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
| | | : | | | |
Db 59 CCNDESLEC 67

RESULT 12
5219739-17
; Patent No. 5219739
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
; JOHN C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: DNA SEQUENCES ENCODING BVGEF120 AND
; BVGEF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN
; VASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVGEF120 AND BVGEF121
; NUMBER OF SEQUENCES: 40
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/559,041
; FILING DATE: 27-JUL-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 450,883
; FILING DATE: 14-DEC-1989
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO:17:
; LENGTH: 164
5219739-17

Query Match 81.8%; Score 45; DB 6; Length 164;
Best Local Similarity 77.8%; Pred. No. 6.4;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
| | | : | | | |
Db 59 CCNDESLEC 67

RESULT 13
5219739-18
; Patent No. 5219739
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
; JOHN C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: DNA SEQUENCES ENCODING BVGEF120 AND
; BVGEF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN
; VASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVGEF120 AND BVGEF121
; NUMBER OF SEQUENCES: 40
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/559,041
; FILING DATE: 27-JUL-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 450,883
; FILING DATE: 14-DEC-1989
; APPLICATION NUMBER: 387,545
; FILING DATE: 27-JUL-1989
; SEQ ID NO:18:
; LENGTH: 164
5219739-18

Query Match 81.8%; Score 45; DB 6; Length 164;
Best Local Similarity 77.8%; Pred. No. 6.4;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
| | | : | | | |
Db 59 CCNDESLEC 67

RESULT 14
5332671-3
; Patent No. 5332671

; APPLICANT: FERRARA, NAPOLEONE;LEUNG, DAVID W.H.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
;GROWTH FACTOR AND DNA ENCODING SAME
; NUMBER OF SEQUENCES: 15
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/389,722
; FILING DATE: 04-AUG-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 369,424
; FILING DATE: 21-JUN-1989
; APPLICATION NUMBER: 351,117
; FILING DATE: 12-MAY-1989
;SEQ ID NO:3;
; LENGTH: 190
5332671-3

Query Match 81.8%; Score 45; DB 6; Length 190;
Best Local Similarity 77.8%; Pred. No. 7.3;
Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 CCNEESLIC 9
Db 85 CCNDESLEC 93

RESULT 15
US-08-915-795-9
; Sequence 9, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
; STREET: 1200 G Street, NW, Suite 700
; CITY: Washington
; STATE: DC
; COUNTRY: United States of America
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,795
; FILING DATE:
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: EVANS, Joseph D.
; REGISTRATION NUMBER: 26,269
; REFERENCE/DOCKET NUMBER: 1064/42983
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 628-8800
; TELEFAX: (202) 628-8844
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 321 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; TISSUE TYPE: Mouse Lung
US-08-915-795-9

Query Match 81.8%; Score 45; DB 3; Length 321;
Best Local Similarity 66.7%; Pred. No. 12;

Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
QY 1 CCNEESLIC 9
Db 145 CCNEEGVMC 153

Search completed: September 5, 2004, 10:21:58
Job time : 8 secs

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